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East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

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30 April 1985

EAST EUROPE REPORT

ECONOMIC AND INDUSTRIAL AFFAIRS

CONTENTS

BULGARIA

- Agro-Industrial Union Chairman Dwells on State of Farming
(Aleksander Petkov; KOOPERATIVNO SELO, 9 Feb 85)..... 1

GERMAN DEMOCRATIC REPUBLIC

- GDR Extension of Coastal Waters Contested
(Rudolf Dolzer; FRANKFURTER ALLGEMEINE ZEITUNG, 21 Jan 85).. 9
- Basic Research Promotes Rapid Innovation for Automation Drive
(Harry Maier; WIRTSCHAFTSWISSENSCHAFT, Nov 84)..... 12

HUNGARY

- Possible New Management, Trade Union Clashes Noted
(Jozsef Mihalyfi, et al., Interview; MAGYAR HIRLAP,
7 Mar 85)..... 31
- Mismanaging a Potential Hard-Currency Earner
(Zoltan Acs; MAGYAR IF JUSAG, 22 Feb 85)..... 35
- Fate of Former Csepel Trust Units in Doubt
(Kristof G. Kocsis; MAGYAR HIRLAP, 23 Mar 85)..... 41
- Housing Situation in Budapest Described
(Agoston Braun; MAGYAR HIRLAP, 14 Mar 85)..... 45
- Fuel Restrictions Hurt Chemical Combine
(Judit Kozma; NEPSZABADSAG, 22 Mar 85)..... 48
- Problems, Condition of Transportation System Examined
(Laszlo Toth Interview; NEPSZAVA, 30 Mar 85)..... 51

POLAND

| | |
|---|----|
| Objections to Prolongation of Rationing Voiced (VETO, No 51, 16 Dec 84; ZYCIE WARSZAWY, 16-17 Feb 85)..... | 55 |
| Market Should Be Normalized, by Marian Mitkus | 55 |
| Sugar Rationing Unnecessary, Antoni Kuzba Interview | 56 |

ROMANIA

| | |
|--|----|
| Cooperation Between Small Industry, National Industry (S. Cruceru, et al.; REVISTA ECONOMICA, No 2, 11 Jan 85).... | 60 |
| Reduction of Production Costs in Chemical Industry (Constantin Ciumbulea; REVISTA ECONOMICA, No 2, 11 Jan 85).. | 64 |
| Deputy Minister Discusses Measures To Increase Coal Production (Dan Otto Surulescu Interview; SCINTEIA, 23 Mar 85)..... | 69 |

YUSOGLAVIA

| | |
|---|----|
| New Ruling on Monetary, Credit Policy (R. Vuksanovic; PRIVREDNI PREGLED, 21 Mar 85)..... | 72 |
| Joint Ventures in 1985 Outlined (BORBA, 21 Mar 85)..... | 74 |
| Briefs | |
| Kosovo Migration | 76 |
| Kosovo Employment Structure | 76 |

BULGARIA

AGRO-INDUSTRIAL UNION CHAIRMAN DWELLS ON STATE OF FARMING

Sofia KOOPERATIVNO SELO in Bulgarian 9 Feb 85 p 2

[Speech by Aleksander Petkov, chairman of the Executive Committee of the Central Council of the National Agro-Industrial Union, on the occasion of an agricultural celebration: "Toward Greater Successes in the Pre-Congress Year!"; date and place not specified]

[Text] This year we are celebrating this festive occasion under the slogan "Intensification--Everywhere and in Everything". Intensification on the basis of the rapid, general introduction of scientific and technological progress. This slogan is particularly appropriate for the goals and tasks that we have set ourselves in order to achieve a significant increase in production while reducing costs.

Modern agriculture in Bulgaria is a major achievement of the party's April agrarian policies. Considering the size of our country, we have built a powerful material and technical base and a great reserve of scientific personnel. Communists and all working people in our country associate these successes with the creative April spirit, with the person and deeds of Comrade Todor Zhivkov, as author, creator and strategist of the Leninist agrarian policies of the party, and with his theoretical works, which provide political and practical approaches to the intensification of agriculture in the stage of advanced socialist society.

Therefore, on behalf of all agricultural workers, allow me to express from this tribune our deep and sincere gratitude to the party leadership, and in particular to Comrade Todor Zhivkov, for their constant care and attention to the development of agriculture. At the same time, I should like to express the most sincere appreciation to all agricultural workers, specialists, scientists and managers for their selfless efforts to put into practice the bold plans and great designs for the future development of Bulgarian agriculture.

The final and decisive year of implementation of the 5-year plan is already upon us. Despite the caprices of nature, during the past 4 years of the Eighth 5-Year Plan our agriculture and our food industry continue to develop at a stable pace.

Compared with 1980, the base year, according to the point system of the National Agro-Industrial Union, the overall average annual growth rates were

2.75 points for total production, 3.9 for net production and 8.7 for net income. The average annual growth rate for public labor productivity was 5 points; included in that number were 3 points for agriculture and 6.9 for the food and tobacco industry. In comparison with the Sixth 5-Year Plan, agriculture production is now guaranteed with one-third fewer loans.

These comparatively favorable economic indices are above all a result of the growth we have achieved in the principal strategic directions.

Thanks to greater production compared with 1983, purchases of grain, sugar-beets, tomatoes, apples, grapes, etc., were significantly higher. The plan was also exceeded for purchases of meat, milk and eggs. On the basis of this, per capita consumption in 1984 reached 71 kg of meat, 214 kg of milk and milk products, 237 eggs and 220 kg of fruit and vegetables.

To what do we owe these successes?

In the first place, the Executive Committee of the National Agro-Industrial Union, the district agro-industrial unions, and the agro-industrial complexes, under the leadership of the party committees and organizations, accomplished the enormous task of implementing decisions handed down by the November consultations and instructions given by Comrade Todor Zhivkov for the general formation of the brigade organization and for the future introduction of economic approaches and mechanisms. The structure and production plans of all agricultural organizations have been perfected, and specific rules for economic mechanisms have been updated.

In agriculture, the brigade organization has been the solid base upon which economic approaches and mechanisms have been built. Considerable work has been accomplished toward the introduction of a piece-work system for the organization and payment of labor. All this has contributed to the promotion of material interest, initiative and responsibility for fulfillment of state plans and counterplans and to the autonomy of the brigade as a fundamental socioeconomic production unit.

In the second place, during 1984 we took a new and decisive step to accelerate and extend intensification for principal strategic produce. On the basis of the engineering projects developed, we are about to enter the complex stage of intensive and superintensive technologies which reflect the peak achievements of scientific and technological progress.

In intensifying production, last year we achieved not only real quantitative changes but also qualitative changes. The fundamental factors of production--biological and agrotechnical factors, fertilization and irrigation--were managed more efficiently.

Intensification of animal husbandry will be a future development. Scientifically sound avant-garde technology has already been introduced in cattle-breeding, sheep-rearing, pig-breeding and poultry-farming.

In the third place, the formation of agroecological brigades marks the beginning of the transition toward a new system of farming which conforms to agroecological

conditions of production. The basis of this system is the principle of crop management which brings influence to bear at every stage of development, with a view to achieving maximum effects in production and economic scale.

Last year was the first year of implementation of the National Program to increase and improve land irrigation. Forty-five thousand new acres were added to the total of irrigated land, 68,500 acres of irrigated land were reconstructed and modernized, 21,500 acres of irrigated land were drained.

In the area of crop management, we have also had some success with artificial fertilization. In this respect, experiences in the districts of Rusen, Plovdiv and Razgrad deserve some attention.

A number of problems in the area of mechanization have been resolved with the production of machines such as cultivators, diggers for routine leveling, modern, pneumatic seeders for winter wheat, units for selective pruning of vineyards and orchards and the Perla 1300 sprayer for small-volume spraying.

Obviously, our economic research has played a part in the achievement of these successes by developing the intensive and superintensive technology which in essence represents a great step forward in the development of our agriculture.

In fulfilling the long-term plan and decisions endorsed by the National Party Conference, we have, without exaggeration, achieved significant results in improving the quality of wheat, apples, tomatoes, green peppers, etc.

These successes would not have been possible without the selfless work of the army of many thousands of mechanics, technicians and specialists who, through these difficult years, have enabled our socialist agriculture to develop in leaps and bounds.

[Inset]

In comparison with the Seventh 5-Year Plan, production during the period 1981-1984 increased at the following rates:

| <u>Item</u> | <u>Rate</u> |
|-------------|--------------|
| Wheat | 26.7 percent |
| Corn | 12.6 percent |
| Sunflower | 77,000 tons |
| Fruit | 229,000 tons |
| Grapes | 97,000 tons |

Overall, 127 brigades harvested over 250 kg of corn per acre of irrigated land.

I am unable to mention all of the brigades by name, but I should like to mention some of the foremost: the brigade at the agro-industrial complex in Pavlikeni, the brigade in the village of Ovcha Mogila at the same agro-industrial complex, the crop-raising and cattle-breeding brigade in the town of Trustenik, Pleven Okrv, and the brigade at the agro-industrial complex in Svishtov.

In 1984, the seven okrvg's of Razgrad, Rusen, Sofia, Tolbukhin, Plovdiv, Burgas and Sliven produced an average milk yield of over 4000 litres per fodder cow. In a number of other dairy complexes and farms, the average milk yield ranged from 5197 to 7125 liters--in Loznitsa and Sevar in Razgrad, Rudnik in Burgas, Tutrakan in Silistra, Bozveliysko in Varna, Gita and Chirpan in Stara Zagora, Samuilovo in Sliven.

[Inset]

Compared with 1983, production in 1984 increased at the following rates:

| <u>Item</u> | <u>Rate</u> |
|-------------|-------------|
| Meat | 2.1 percent |
| Milk | 1.2 percent |
| Eggs | 2.2 percent |

Seven districts achieved an average yield of more than 4000 liters per cow.

On behalf of all those present, on behalf of the Executive Committee of the Central Council of the National Agro-Industrial Union and the Central Committee of the Union of Agro-Industrial and Food Industry Workers, allow me to congratulate most sincerely our foremost men and women for their remarkable contribution to the grain production and to wish them health and new and still greater successes.

With legitimate pride, I can state that a significant growth in production has been achieved and labor productivity has been raised. The per capita production and consumption of certain agricultural products puts Bulgaria among the leading countries of the world. Our successes in agriculture have received international acclaim.

[Inset]

In 1984, by using intensive and superintensive technology, 500,000 acres of irrigated land were used to raise corn, 9 million acres were used for wheat, 100,000 acres for barley, 62,500 acres for soy and 37,500 acres for sugar-beets.

However, there are certain weaknesses in the system. Therefore, despite the festive nature of our meeting, allow me to say that even on the brightest of holidays, Bulgarians can point to unfinished business as well as to success. This very fine national trait is now clearly expressed in a certain lack of satisfaction in our achievements.

Certain negative trends can doubtless be blamed on the international situation and the unfavorable climatic conditions during 1983-84. However, the main reason for the slackened pace in agricultural production, and for the poor rate of return on resources invested in production, is concealed in the slow reorganization of the new methods and practices of the skilled workers. This prevents the fullest use of the great opportunities offered by our large-scale socialist agriculture.

Even the most cursory comparative analysis demonstrates that great opportunities are overlooked and that the National Agro-Industrial Union and a number of okrvg and local organizations are suffering losses. Let us take as an example the state of cattle-breeding. The average milk yield from a fodder cow is 3630 liters. Seven districts have exceeded 4,000 liters but 15 districts fell below the average for the country, among them the districts of Mihaylovgrad, Lovech, Yambol and Sofia. The situation with the growth of pig-breeding is no better.

Indisputably, crop-raising is affected by ground and soil conditions, the amount of irrigated land and other natural factors. But here too variations in output are inexplicable and unfounded, especially in districts with almost identical natural and economic conditions. The average difference between the highest and lowest wheat yield is 310 kg. The difference between the highest and the average yield for the country is 108 kg. For corn, the difference between the highest and the average yield for the country is 74 kg per acre. The most rudimentary calculation demonstrates that if those districts lagging behind level out not with the highest yields but with the average for the country, production could be increased by an additional 25 to 30 percent.

What are we actually talking about? What is lacking and what are we failing to do?

In the first place, our weakness starts with the brigades, where we actually produce. In many districts and agro-industrial complexes, the brigades have not achieved the optimum ratio between the principal factors, i.e., land, people and technology, provided for in the engineering plan; the internal organization and specialization of the brigades has not been completed; the piece-work system of organization and pay has not been established and, last but not least, state and local financing has been incorrectly used.

In the second place, there have been many errors in the intensification of production. For several years in a row now a large part of the basic tilling has been done during November and December and, not infrequently, from January through March. Just as great a misfortune is that, at the time of tilling, no organic or chemical fertilizers were used, as a result of which there is no basis set for normal plant feeding. Not all the steps required for crop-raising are carried out at the right time and with sufficient effort to provide the greatest effect. Last year many districts and agro-industrial complexes raised fall crops until mid-April. The most favorable time for dealing with weeds, diseases, and garden pests was ignored. Due to errors in crop protection and imperfect technology for cereal crops, thousands of acres are standing fallow.

Land conservation and restoration of soil fertility are also weak areas. As a result, the soil fertility of more than 4 million acres has been reduced.

The principal strategic task, even this year, will be the general introduction and intensification of scientific and technological progress to ensure the production of a minimum of 11 million tons of grain and the planned quantities

of protein to ensure sufficient fodder for intensive development of animal husbandry. The second, and equally important, strategic task will be to sustain and expand the export position of our country and to develop resourceful policies to open up new markets for the produce of our agricultural and food and tobacco industries. It goes without saying that we must ensure the planned production of industrial crops, fruits and vegetables, which are essential for our food industry, for fresh consumption and for export.

What are the possible solutions for the pressing agricultural problems?

Last year at the National Conference in Varna and at the meeting with the first secretaries of the district committees of the party in Veliko Turnovo, Comrade Todor Zhivkov explained the necessity of and pointed the way toward the creation of a new system of farming which could ensure positive and lasting results in agriculture and guarantee its full independence from the caprices of nature.

The issue here is that agriculture be established on a completely scientific basis as new systems, methods and mechanisms are put into practice to ensure the rapid and general introduction of the foremost scientific and technological achievements of avant-garde technology. On this basis we should be able to utilize our great agricultural advantages to expand production and increase efficiency.

The scientific and technological achievements are the factors which allow us to apply agroecological methods and to build differentiated systems of farming in agroecological districts. As has already been done with the agroecological brigades, the most suitable scientific and technological achievements for the district will be introduced initially and thereafter they will be brought into mass practice. There will be a transition to a higher class of farming, i.e., toward a system of crop management, toward faultless farming based on agroecological methods.

Which problems must we resolve in order to create the necessary conditions to achieve what is in principle a new system of farming?

Above all we must take the necessary steps to ensure land protection and conservation for increased soil fertility.

The issue that we absolutely must resolve is exploitation of the biological factor. Our farming has at its disposal a rich assortment of varieties and hybrids with great opportunities, especially in poultry, tobacco, vines and cotton. We have yet to find a successful solution to the problem of securing suitable varieties and hybrids for pasture-fodder, leguminous and vegetable crops, sunflowers and beetroot. Decisive steps must be taken to improve and maintain the variety, selection and quality of seeds and their pre-sowing treatment.

We must quickly create the material, technical and organizational conditions required for the rapid perfection of selection methods and the introduction of biotechnology, such as tissue culture and cellular and genetic engineering.

Our efforts in animal husbandry must be directed toward a sharp increase in animal productivity based on more effective use of fodder, capital investment and labor resources. Specialization in sheep-rearing and cattle-breeding will not continue at accelerated rates.

A great resource for the increase of livestock production is increased fecundity. This forces us to impose the use of new methods of breeding and to introduce embryo transplantation, with a view to intensifying reproduction.

This year and throughout the Ninth 5-Year Plan we must ensure the broad application of new techniques of harvesting, storing and using grain fodder, for example, whole plant harvesting of corn, storage of grain with high humidity, grinding together with corncobs, etc.

The new technologies for improving the quality of grass in meadows and pastures and new systems for their use will ensure full and correct utilization, especially in mountainous and semimountainous regions. We must quickly and unhesitatingly introduce new methods of harvesting and storing lush, grassy fodder with a view to maximum preservation of nutritional value. As early as this year, a strict system for complete analysis control of the quality of fodder will be introduced.

It must be perfectly clear to everyone that we cannot count on success if we do not introduce changes in animal husbandry and fodder production. It is true that much has already been done to increase fodder production and improve animal feed. As a whole, however, we have not resolved this problem. We have not ensured the production of sufficient corn, grass and lush fodder.

In 1985-86 fodder production must be sufficient to ensure the full introduction of model feeding. As a goal, we must turn our attention to the basic fodder crops, corn and alfalfa, and the most correct use of meadows and pastures. We must exploit the opportunities offered by new technology, developed at the Institute for Soy, for cultivation of soy and corn for grain. We must exploit more effectively second crops, corn and soy, and early-season crops, turnips, peas, triticale, fodder blends, etc.

As I have already said, this will be a decisive year for agriculture. The tasks we have before us acquire a distinct political accent. Fulfillment of the plan must ensure achievement of the principle socioeconomic task, endorsed by the 12th Party Congress--complete satisfaction of the constantly increasing material and spiritual needs of the people, by means of intensification.

What is the distinctive feature of our plan for 1985?

The state plan foresees high rates of increase in agricultural produce, both fresh and processed, a sharp improvement in the quality of produce and greater efficiency of production.

Fulfillment of these tasks requires that all levels of management in our system apply new methods for the discovery and use of resources and raise to a much higher level the exigences, discipline and responsibility for fulfillment of

the state-planned tasks. The fundamental criteria for emulation in the agro-industrial complexes and brigades must be the ultimate economic results: increased productivity and efficient production.

Today as we celebrate our agricultural holiday, we once again call upon all agricultural workers, mechanics, specialists, managers and scientists, who work so selflessly and diligently, to make the final year of the Eighth 5-Year Plan the turning point in the application and utilization of the ultimate scientific achievements, for successful fulfillment of the great debts which our industry owes to the party and to the whole nation.

Finally, on behalf of the organizers of today's celebration, the Central Council of the National Agro-Industrial Union, the Central Committee of the Union of Workers from the Agro- and Food and Tobacco Industry, and on behalf of all agricultural workers, allow me to assure the Central Committee of the party that we shall employ all our knowledge, skill, ambition and strength to fulfil the very difficult, important, yet, at the same time, attainable goals that have been set us, and look forward with dignity to the 13th Party Congress.

Happy holiday, dear agricultural workers.

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GERMAN DEMOCRATIC REPUBLIC

GDR EXTENSION OF COASTAL WATERS CONTESTED

Frankfurt/Main FRANKFURTER ALLGEMEINE ZEITUNG in German 21 Jan 85 p 6

[Article by Dr Rudolf Dolzer: "Is the GDR Permitted to Extend Its Coastal Waters? The New Maritime Law Convention Is Not Yet in Effect"]

[Text] The course and contours of the German Baltic coast are such that they require, for practical reasons, at least a minimum of cooperation between the Federal Republic of Germany and the GDR. It is particularly necessary to come to an agreement concerning maritime traffic near German harbors, protection of the environment and safeguarding the natural resources of the Baltic Sea. All these areas of cooperation are naturally affected by the GDR's decision to extend control over its coastal waters from 3 to 12 nautical miles.

This decision will not change fishing rights in the Baltic since the GDR, as of 1 Jan 78, has already established its own fishing zone. The entire Baltic Sea is now divided into national fishing zones and in June 1978 the Federal Republic followed the lead of the other states. In assessing the legal aspects of the situation created by the GDR, a distinction must be made between the effects of the act and the procedures employed. A point of departure is the principle that the determination of territorial waters is a unilateral act, subject to the sovereign decision of each coastal state. International law does, of course, set limits to the right of coastal states to extend their territorial waters. For centuries it was held that territorial waters may not exceed a width of 3 nautical miles. After World War II, this rule was increasingly challenged and the new maritime law convention grants coastal states 12 nautical miles. However, since the convention is not yet in force, the legal status continues as before to depend on the practice followed by the states and on their corresponding interpretation of the law. The negotiations during the Third Maritime Law Conference have already caused important changes in legal opinions, especially with regard to coastal waters; special provisions still apply to straits.

In the general practice of recent years, a clear majority of states has expressed the opinion that the law in this area has already changed, even before the convention is in force, and that the 12-mile-zone can now be claimed legally. The fact that the maritime power of the United States wants to maintain the old legal code and continues to oppose the new development, will hardly have a lasting effect on this change in the law.

That this is also the opinion of the Federal Republic is reflected in its November 1984 decision to extend its territorial waters in the North Sea in a timely fashion even to 16 miles. Despite serious legal reservations and objections in principle to such a step, the Federal Government has reaffirmed its related decision of October 1983. Even though the Federal Government did not intend this step to imply a general introduction of the 12-mile-zone--and continues to claim only 3 miles in the Baltic--it would, after this announcement, no longer be in a legal position to protest effectively against the GDR's extension of its coastal waters to 12 miles.

The Victorious Powers and the German Treaty

Aside from these considerations of maritime law, there is a question whether the GDR was able to take such a step with the agreement of the victorious World War II powers. These powers still bear the responsibility of determining Germany's borders. This fact was acknowledged in the past, for instance, when the Western powers, based on their status as victors, acquiesced to minor border corrections agreed on by the Federal Republic, France, Belgium, Luxembourg and The Netherlands. The German Treaty of 1954 stipulates in Article 7 that the final determination of Germany's borders will await the conclusion of a peace treaty for all of Germany. While the GDR is not bound by this treaty, the legal principles expressed therein is a direct consequence of Germany's special status and does not arise out of treaty provisions.

It is not known whether the Federal Republic, on its part, asked for the formal consent of the Western powers before extending its territorial waters in the North Sea. Reading Article 7 of the German Treaty in isolation would indeed raise doubts as to the legality of any unilateral border arrangements. There can be no doubt that coastal waters are part of the sovereign territory of a state and that any changes here also constitute a change in national boundaries. However, by freely interpreting the rights of the victorious powers from a historical perspective and by taking their reasons into account, a good argument can be made for treating coastal waters differently in this context from the border conditions created by the war and for excluding territorial waters altogether from control by the victorious powers.

In this sense, one can also argue in general that coastal waters represent a special kind of sovereign territory whose acquisition follows automatically from the exercise of sovereign power over the land. It cannot be assumed that possible further developments in the general maritime law and in the sovereign rights of coastal states were considered in 1954 when the German Treaty was concluded.

Consultations Are Necessary

One can nevertheless be of the opinion that the special interest of the Federal Republic in the continuation of four-power responsibility--and particularly the responsibility of the Western powers which arises out of the German Treaty--calls for great restraint in any border regulation and, therefore, the formal agreement of the Western powers should have been

obtained in this matter. However, strictly from a legal point of view, such a broad interpretation of the rights of victors with regard to coastal waters does not appear to be mandatory. One cannot, therefore, assume that the step taken by the GDR required the consent of the victorious powers. Nevertheless, considering the sensitivity of this legal area and the possible interpretations of GDR's actions, the Federal Republic and the Western powers may want to consider the advantage of issuing a clear statement on their interpretation of the event from the point of view of Germany's legal status and thereby avoid any possible erosion of Germany's legal position.

These types of questions relate to the legal assessment of the procedure by which the GDR has extended its territorial waters. The Federal Republic was not even consulted with regard to coastal regions in which the definition of mutual territorial limits presents obvious difficulties and where the accommodation of the interests of all involved parties requires prior consultations and consideration of the peculiarities of the situation. A unilateral definition of the extent of territorial waters restricts the freedom of action of the other party and places it in an inferior position for negotiations. The International Court--presumably with this in mind--has ruled that boundaries may be fixed only after consultations and negotiations. The court evolved this legal principle with regard to boundary disputes involving the continental shelf, but it surely also applies to the problem of territorial waters.

It remains to be considered whether the GDR could meet the obligations arising out of this principle ex post facto, even after its unilateral act of extending its territorial waters. A better case can be made, however, for the view that international law requires consultations prior to a unilateral decision. Only then can an objective assessment of the position and interest of both parties be assured. Correct procedures are particularly important here, because international law does not provide precise criteria for territorial limits which would be valid under all geographic conditions.

It is, therefore, in the interest of the Federal Republic to make a formal protest in East Berlin against the action of the GDR and to be emphatic in withholding recognition of the condition created by the GDR in areas where territorial limits need to be defined until all questions raised have been resolved through negotiations.

12628
CSO: 2300/311

GERMAN DEMOCRATIC REPUBLIC

BASIC RESEARCH PROMOTES RAPID INNOVATION FOR AUTOMATION DRIVE

East Berlin WIRTSCHAFTSWISSENSCHAFT in German Vol 32 Nov 84 pp 1614-1629

[Article by Prof Dr of Economics Harry Maier, Deputy Director of the Institute for Theory, History and Organization of the Sciences; GDR Academy of Sciences: "The Formation of Strategies within the Framework of the Scientific-Technical Revolution--Problems Concerning the Increased Contribution of Basic Research to the Innovative Potential of the National Economy"]

[Text] Summary

In the first section of the paper, the author deals with the connection between the efficacy of basic research on the one hand and the creation, implementation, diffusion and economizing of scientific-technological innovations on the other. This connection is at present largely affected by the time factor. This view derives from two contradictory processes: From the radical changes which have taken place with respect to natural resources and brought about a "value revolution: of existing products and technologies, and from the emergence of an extensive potential of scientific-technological solutions, for example in the fields of information technologies, microelectronics, automation, energy, food production, biotechnologies, modern materials and others. The timely definition and utilization of the potential efficacy of these solutions decisively depends on the qualitative level of strategic planning. In finding strategies in the field of basic research, two closely connected lines are distinguished: First, strategic efforts dedicated to cognitive progress and the working out of scientific-technological solutions and, second, the discovery of strategies with a view to innovations which must proceed from cognitive progress and advances in research techniques leading up to scientific-technological solutions as well as from the development of existing and latent demand. In this context, the author looks into the dialectics of cognitive progress and research techniques, the significance of implementing enhanced performance standards for research and production as well as the necessity for linking material stimulation to scientific-technological solutions in accordance with their strategic importance for the development of the national economy.

The further organization and perfection of the developed socialist society in the GDR is proceeding in a climate of scientific-technological revolution and more acute class conflicts. This gives rise to many new challenges to the development of science and its contribution to the improvement of the national economy's innovative potential.

The present scientific-technological revolution is linked with the restructuring of the system of productive forces and the emergence of a qualitatively new standard of productivity. This exerts a far ranging influence on the further development of the socialist society and the evolution of its essential features. It emits crucial impulses with respect to the development of the balance of strength between socialism and imperialism as well as the course of the struggle to repel the aggressive forces of imperialism, secure peace and return to detente in international relations.

By its cognitive advances and the solutions to various problems furnished by it, basic research directly affects the basic innovations sustaining the scientific-technological revolution such as microelectronics, flexible automation, robotics and telecommunications, nuclear energy in its various forms of application, new energy and materials conserving technologies, modern biotechnology, increased use of recyclable energies, further processing of coal, natural gas, crude oil and biomass, development of high-capacity materials, new traffic and environmental solutions.

The advance of efficiency in the national economy, the speed of its transition to the intensive type of expanded reproduction vitally depend on the capacity of basic research, its ability to respond flexibly, specifically and in a timely manner to the challenges presented by the scientific-technical revolution.

It needs scientific-technical innovations to turn science from a "general social productive force" into an "immediate productive force." This is a process which constantly needs dealing with again, not a social status achieved once and for all. The fundamental prerequisite for the efficient organization of this process is an extensive knowledge of the motive forces and contradictions, which drive or block it. Involved here is not just the accomplishment of a technical-organizational task or simply the application of scientific-technological perceptions in production: At stake is a social process involving the resolution of the contradiction between new and old elements of the development of human productive forces. The resolution of this contradiction begins with the creation of an innovation which is the result of the fusion of a scientific-technical problem solution and an existing or latent demand. It ends with its diffusion and economizing. Marx was well aware of this fusion as the starting point for the creation of an innovation. He commented as follows the causes of the major innovation push which triggered the industrial revolution of the 18th and 19th centuries: "Mechanized labor as a revolutionary element is born as the result of the excess of demand over the possibility to satisfy it with the old means of production." (1)

Innovations as the Engine for the Development of the Productive Forces

From Marx's standpoint, therefore, the availability of a scientific-technical problem solution--as the engine of the development of the productive forces--does not by itself suffice to produce and carry out innovations. Such a problem solution turns into an innovation only when it is able to merge with an existing or latent demand. This requires an economic mechanism able to compel this fusion in conformity with the basic objective of the respective production conditions. Upon transition to the intensive type of expanded reproduction--a task of historic dimensions--this economic mechanism is perfected, because scientific-technological innovations are the key to intensively expanded reproduction. One of the basic prerequisites for effectively handling this key is a better appreciation of the role of innovations in the process of intensively expanded reproduction and its specific influence on the growth of the productivity and efficiency of social production.

Consequently we are confronted with two contradictory aspects of scientific-technological innovations, which make them the engine of the development of the productive forces. At the same time as developing a higher standard of productivity by new products and technologies, they undermine the efficiency potential of the formerly dominant products and technologies. Marx therefore considers the decisive feature of innovations their "exceptional productive force,"⁽²⁾ in other words their ability to generate a higher standard of productivity. Thanks to its "exceptional productive force," the innovation is able to gradually prevail in the technological competition with existing products and processes, until it finally destroys the latter's efficiency potential and its own "exceptional productive force" becomes the standard productive force. From that point on, the respective product or process ceases to be an "exceptional productive force" and innovation. Consequently it is always just a matter of time until the above average efficiency potential of particular products and processes is destroyed by the "exceptional productive force" of new products and processes, and the earlier ones are bound to be the losers in the technological competition.

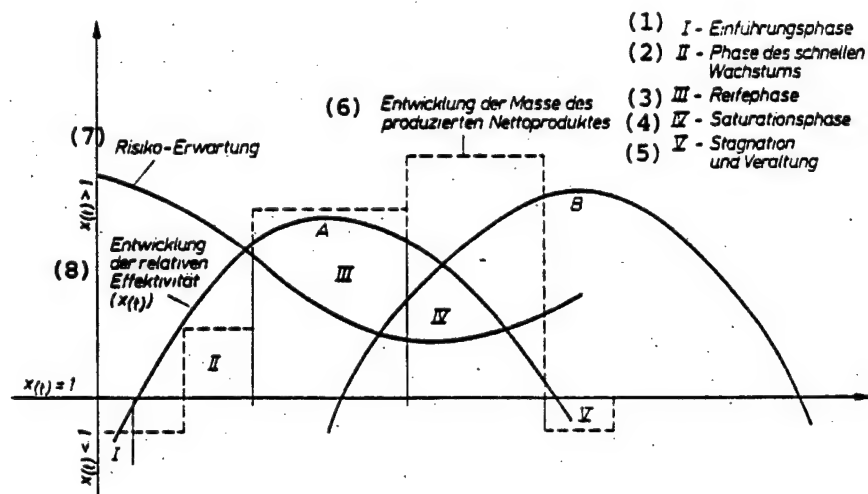
The analysis of the dialectic of dynamic and average efficiency is vitally important for the generation of scientific-technical strategies. Only in the period of time before the "exceptional productive force" is not yet in general use, is it possible to realize a productivity rate and volume of the net product, which justify the enormous prior performances needed for the realization of the innovations. This explains why the time factor (the point in time, the period of time and the time horizon) represents the crucial problem of the organization of scientific-technical strategies. This claim will be briefly explained by Illustration 1 below.

The ratio of the "exceptional productive force" of the innovation to the mean efficacy of all producers in the field of production is here presented as a coefficient of relative efficacy, $x_{(t)}$. The dynamic efficacy of the innovative production unit, $e_n(t)$, represents the numerator and the mean efficacy of the entire field of production, $\bar{e}(t)$ the denominator.⁽³⁾ In contrast to the product-life cycle concept, this analyzes the development of

the relative efficacy of an innovation which, as shown in the various calculations, may be presented as a logistic curve. To analyze the evolution, growth, maturation and gradual waning of the "exceptional productive force" of innovations, it is imperative to distinguish five stages of its development: The introductory stage, the stage of rapid growth, the stage of maturity, the stage of saturation, stagnation and obsolescence. In the course of these five stages we note changes in

- The ratio of dynamic to average efficacy,
- The ratio of dynamic efficacy to the volume of the produced net product,
- The original value per unit of resources
- The proportion between the various types of innovations (product and innovations, basic, improvement and pseudo innovations),
- The risk behavior of the production units,
- The scientific-technical strategy variant to be concretely adopted,
- The most suitable type of organization for the innovation process and the most effective kind of material interestedness.

Illustration 1: Five Stages of the Development of the Relative Efficacy of a Basic Innovation, the Development of the Volume of the Net Product and Risk Behavior



Key:

- | | |
|--------------------------------|---|
| 1. Introductory stage | 6. Development of the volume of the produced net product. |
| 2. Stage of rapid growth | 7. Risk expectation |
| 3. Stage of maturity | 8. Development of relative efficacy ($x(t)$) |
| 4. Stage of saturation | |
| 5. Stagnation and obsolescence | |

Each of these topics deserves to be dealt with in detail, but this cannot be done here for lack of space. I will confine myself to describe in somewhat greater detail the link between the development of dynamic efficacy, the volume of the produced net product and risk behavior.

In the first stage, both dynamic efficacy and the volume of the produced net product are still considerably lower than at the majority of producers in the field of production. This state of affairs changes in the second stage, when both dynamic efficacy and the mass of the produced net products grow much faster than the efficacy and net product of the other producers. In the stage of maturity, the rate of growth of dynamic efficacy begins to slow down and actually diminishes toward the end of this stage. However, the proportion of the net product in the net product generated by the entire field of production continues to increase rapidly; similar growth is displayed by the mean efficiency indices (labor productivity, output-capital ratio, the economical use of materials and energy) of the production unit. The volume of the net product and the mean efficiency standard of the innovative production unit continue to increase in the stage of saturation and in fact achieves its highest level. Frequently this produces the illusion of an exceptionally favorable economic situation, because the danger arising from the decline of dynamic efficacy is not perceived. While the risk inherent in the innovation tends to be overestimated in the first stage of the innovation cycle, it is often underestimated in the fourth stage. This is due to the fact that, according to the experiences and knowledge of the overwhelming majority of producers, any innovation initially seems to be unrealistic. In the stage of saturation, on the other hand, the risk is underestimated by the same overwhelming majority of producers, because the highest average standard of efficiency has just been achieved. Both the overestimate and the underestimate of the risk involve irreversible losses of efficiency. The only means to avoid such losses is a high qualitative standard of strategic work.

In the conditions of the present scientific-technological revolution, the time factor is of particular importance. Consideration of it represents a fundamental prerequisite for the organic coupling of the benefits of socialism with the accomplishments of the scientific-technological revolution. This arises from the contradictory nature of the present scientific-technological revolution:

For one it is accompanied by a radical change in the situation regarding resources. This has resulted in the revaluation of existing resources and the devaluation of existing products and technologies--a visible reflection of the fact that, measured by the extent of resource utilization achieved, the economic efficiency of the available technologies and the new value creation of existing industrial products is no longer adequate; their efficacy potential was consumed in the 1950's, 1960's and 1970's.

For the other, we now have an extensive potential of problem solutions, for example in information technology, microelectronics, automation, energy, nutrition, biotechnology, modern materials and in other fields. We are currently witnessing how, under pressure from the demand arising from the new situation with respect to resources, a strong innovation push is provided by

this potential. It is bound to result in the perceptible speed-up of scientific-technological progress and, therefore, a qualitatively more elevated productivity standard.

Still, for the moment the first process is still predominant. This represents one reason resulting from the developmental processes of the productive forces--evidently arrived at a turning point--for the currently noticeable worldwide tendency of industrial productivity and production growth to slow down. This can be effectively counteracted only once the second process described obviously exceeds the first one, in other words, when "the opportunities offered by the scientific-technological revolution turn into the direct and main reserve for performance growth and the efficiency of our national economy." (4)

Time Factor and Value Revolution

The revaluation of natural resources and the devaluation of existing technologies give rise to a manifestation described by Marx as "value revolution." (5)

The revaluation of resources is demonstrated by, among others, the 10-fold rise in the real median prices of crude oil--still the most important primary energy source because holding a 42 percent share worldwide--on the capitalist world market in 1973-1982. The rise in nominal terms was 18-fold! On the other hand a radical drop has been recorded in the prices of standard industrial products, resulting in the lowest price standards in 30 years. In the field of machine construction, for instance, producers of products equipped with traditionally wired electronics are almost unable to realize their materials and raw materials costs, let alone the cost of live labor and the earnings needed for accumulation and consumption (see Illustration 2).

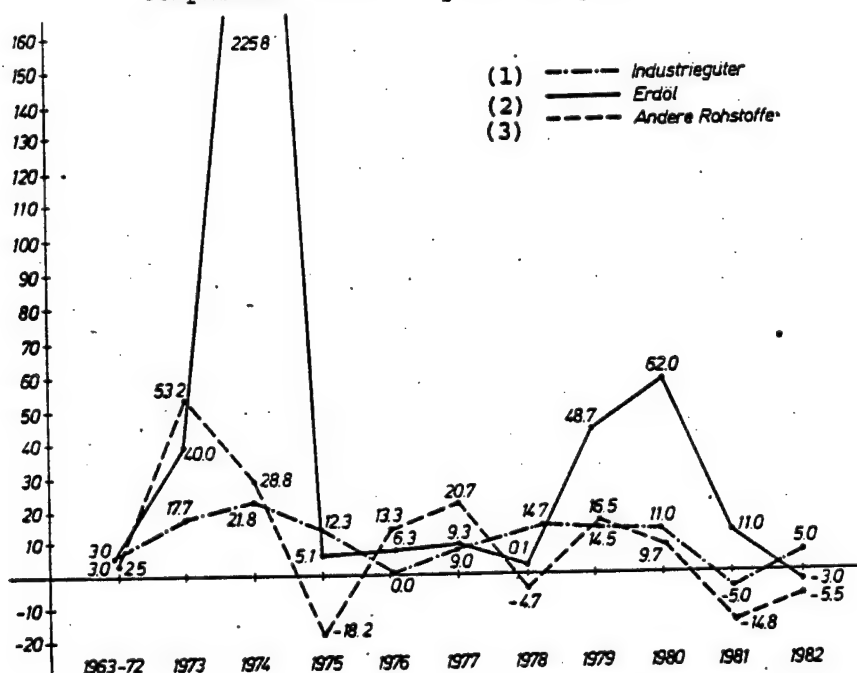
On the other hand, producers able to base their product and process innovations on microelectronics are currently realizing exceptionally large output growth rates, combined with a newly created value per unit of resources, which frequently exceeds that of traditional products by a factor of 100. Let us remember that, in 1972-1980, extraordinary annual growth rates were achieved by industrial robots of the second and third generation (44 percent), computerized numerically controlled machines (56 percent), computer assisted development (CAD) (60 percent), computer assisted manufacture (CAM) (40 percent) (see table). This demonstrates the enormous efficiency potential of the basic innovations sustaining the scientific-technological revolution--provided we know how to use basic and applied research and technical-experimental realization to obtain timely access to them. At the same time this example shows that those who cannot manage this access are unable even to maintain the productivity standard achieved before. This graphically illustrates the dimension and complexity of the challenge confronting us.

With regard to the increase in the contribution of basic research to the speed-up of scientific-technological progress in the GDR, it seems to me that the settlement of the following groups of problems is particularly important:

- The achievement of a qualitatively new standard of strategic work, making it possible to make the necessary cognitive progress and obtain a range of problem solutions adequate to raise the national economy's innovative powers;
- The drafting of performance targets for research and production responsive to the objective speed of development of the current scientific-technological revolution;
- Resolution of the problem of transferring scientific-technological projects to production in such a manner that the initial realization of innovations may be achieved at a point in time and within a period most favorable for the utilization of its efficiency potential;
- The improvement of the flow of information between research at the Academy of Sciences, universities and industry.

It is possible here only to deal with some aspects of these four groups of problems. (6)

Illustration 2: Price Development on the Capitalist World Market (percentage comparison with the previous year)



Key:

- 1. Industrial goods
- 2. Oil

3. Other raw materials

Source: FINANCIAL TIMES, 11 October 1982

Table: Basic Innovations of Flexible Automation

| (1) Innovation | (2) Jahr der kommerziellen Einführung | (3) Dauer der Einführung (Jahre) | (4) Jährliche Wachstumsrate (Prozent) | |
|--|--|---|--|-------------------------|
| | | | 1972-1980 | 1980-1990 ^{a)} |
| (5) Numerisch ge- steuerte Werk- zeugmaschine (NC) | 1955 | 17 | 35 | 20...30 |
| (6) Roboter | 1962 | 10 | 44 | 25...30 |
| (7) Rechnergestützte Entwicklung (CAD) | 1965 | 7 | 69 | 40...50 |
| (8) Computerisierte NC-Maschinen | 1969 | 3 | 56 | 40...45 |
| (9) Rechnergestützte Fertigung (CAM, DNC) | 1967 | 5 | 40 | 30...35 |
| (10) Flexible Fertigungssysteme | 1969 | 3 | 30 | 35...45 |
| (11) a) Schätzung. | | | | |

Key:

- | | |
|---|---|
| 1. Innovation | 6. Robots |
| 2. Year of commercial introduction | 7. Computer assisted development (CAD) |
| 3. Length of introduction (years) | 8. Computerized NC machines |
| 4. Percentage annual growth rate | 9. Computer assisted manufacture (CAM, DNC) |
| 5. Numerically controlled machine tool (NC) | 10. Flexible manufacturing systems |
| | 11. a) Estimate |

The Generation of Research Related and Innovation Related Strategies

Cognitive advances and the resolution of basic research problems do not automatically result in the improvement of the national economy's innovative powers. They become an engine of efficiency growth only when the respective problem solutions can be translated into a new product or process. That, in turn, depends on the standard of the cognitive advance and the range of variants of the problem solutions as well as on the ability to make these the basis of product and process innovations at a point in time favorable for the growth of efficiency and within an appropriate period. For that reason there is a crucial need for strategic work to take greater heed than ever of the time factor (point in time, period of time, time horizon), both with regard to the achievement of the cognitive advance and the production of scientific-technological problem solutions.

Strategy generation represents that link in the chain objective-program-planning of scientific-technological progress, which determines the eventual standard. Its results make it possible in cooperation with industry to draft long-range programs and concrete projects of basic research for the creation, realization, diffusion and economizing of specific basic innovations. Strategy generation in the field of basic research always needs to consist of two distinct but intimately connected parts: On the one hand, strategic efforts within the framework of specific scientific disciplines or interdisciplinary research complexes directed to cognitive advances and the production of problem solutions; on the other innovation relevant strategy formation which must be based on problem solutions arising both from cognitive advances and the progress of research techniques as well as on the trend of the existing or latent demand. That is the only chance to early on recognize the social dimensions of the scientific-technological problem solution arising from basic research, show up the conditions needed for its utilization for the satisfaction of the needs of the socialist society and gradually provide them. This will also make it possible to better conform to the time factor with respect to the creation and realization of scientific-technological innovations.

It is most important to observe the specifics of science-related and innovation-related strategy generation yet, at the same time, take into account their common features and connections. Research-related strategy formation is directed primarily to the creation of original products--to use a term employed by Marx--, able to become the starting point for an intellectual reproduction process and, ultimately, part and parcel of the intellectual-cultural wealth of mankind and the intellectual national wealth of a people. Innovation related strategy generation, on the other hand, is oriented to the creation of innovations able to become the starting point of the material reproduction process. On them depends the development of a country's material national wealth.

Science as a Kind of Accumulation of a People's Intellectual National Wealth

The intellectual national wealth created by scientific effort--as part of the general work of society--consists mainly in the cognitive and problem solving potential available to a society. In this context, Marx talks of science as "part of the general social productive forces,"(7) the "product of general historic development in its abstract quintessence,"(8) the "theoretical advance of mankind,"(9) "the soundest kind of wealth."(10) For Marx, the development of the intellectual national wealth of a people is a kind of accumulation. He compares it with the ongoing accumulation of the individual skill of the worker and writes: "The results of knowledge achieved are taught and reproduced as elements of knowledge and further processed as such elements by the learner. In these cases, reproduction costs are never related to the original production costs."(11)

Our stock of knowledge and problem solutions--in other words the intellectual wealth of our country--is also subject to the laws of simple and expanded reproduction in the most general meaning, such as reflected in the law of the economy of time or the principle of rationality. New scientific knowledge and

problem solutions not only add to the existing fund of knowledge and problem solutions, they also devalue and revalue existing knowledge and problem solutions, in Marx's words give them a new "specific weight" within the total stock. The simple and expanded reproduction of the stock of knowledge and problem solutions is a process linked to the restructuring of knowledge, its new valuation and revaluation leading to the emergence of new groups of problems and the disappearance of exhausted ones. Particular disciplines, research trends and special fields move to the fore, while others change, are renewed or fade away. Research related strategy formation must therefore focus on these processes. To superficially consider scientific progress as a development of a cumulative nature is bound to lead to the linear extrapolation of existing trends without the ability to discern the vital turnover points and most promising avenues in the development of the various scientific disciplines and the entire system of science.

The Dialectic of Cognitive Progress and Research Equipment as the Cardinal Issue of Science Related Strategy Generation

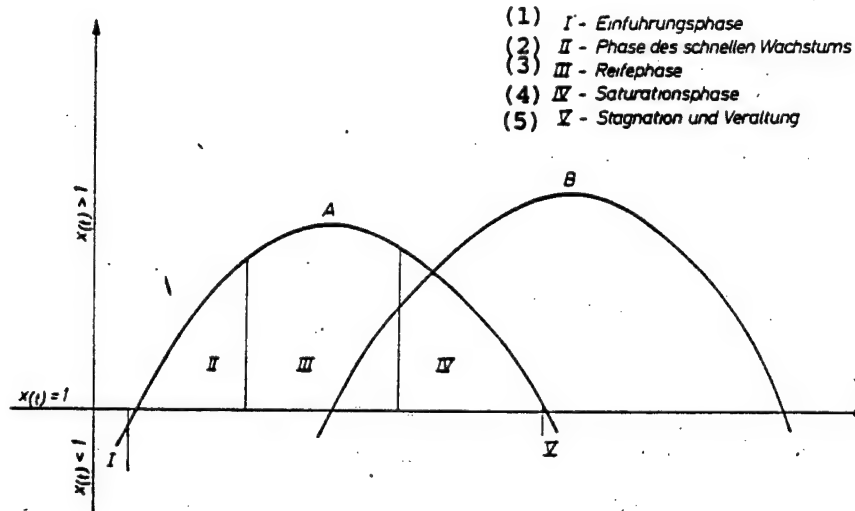
The analysis of the dialectic of cognitive progress and research equipment related to concrete groups of research problems represents a key issue of largely research related strategy generation. It is precisely at the present time that this dialectic is profoundly affecting the nature and structure of basic research.

In view of the fact that cognitive advances in basic natural science research are most intimately related to progress in the field of research equipment, the creation of this equipment is increasingly turning into an inherent element of basic research as such. Consequently, the technical sciences are sometimes directly integrated with basic natural science research. Changing at the same time is the type of basic researcher who, with growing frequency, needs to combine his theoretical abilities with the skills of the engineer. This is due to the fact that at the present stage of natural science research, the processes of discovery and invention are increasingly merging and affect one another. Not helpful for the analysis of this dialectic are concepts picturing the structure of science as a pyramid with basic research at the top, applied research in the middle and technical realization of the knowledge gained by both at the bottom. In this interpretation, the technical sciences and also research equipment are a kind of overflow of basic and applied research.

If, based on experience, we assume that a no more than a specific cognitive advance may be achieved within the scope of an existing research equipment, it is obvious that the following connection must exist between the research equipment and the research results achievable, which might be described by a coefficient of relative efficiency, $x(t)$, research with the latest research equipment by comparison with research with average research equipment. In this context research operations dealing on the basis of the latest research equipment with a particular group of problems represent the numerator ($F_n(t)$), research operations dealing with the same group of problems on the basis of average research equipment the denominator ($F_d(t)$).

Illustration 5 demonstrates the development of the five stages of this relative efficiency.

Illustration 3: Development of the Relative Efficiency of Research Operations Depending on Research Equipment



Key:

- | | |
|--------------------------|--------------------------------|
| 1. Stage of introduction | 4. Stage of saturation |
| 2. Stage of rapid growth | 5. Stagnation and obsolescence |
| 3. Stage of maturity | |

After an appropriate introductory and learning stage, it will be possible for research operations with the latest (or "exceptional") research equipment to achieve cognitive advances and problem-solutions which were not feasible with earlier research techniques. This assumption has far-reaching consequences which I am able merely to briefly indicate at this point:

1. Research collectives which are the first to have available some "exceptional" rather than generally used research equipment, usually approach a field of problems not yet absorbed and are therefore able to originate fundamental scientific perceptions and problem solutions. Of course this applies mainly to the natural sciences (experimental and laboratory sciences), but it is also increasingly important for mathematics and some social sciences.
2. Research collectives able only to make new research equipment the basis of their research efforts when it is already in general use, will

therefore confront a generally explored field and be reduced to making only small cognitive advances and originate unimportant problem solutions. Their main efforts will therefore have to be limited to supplementing cognitive advances earlier achieved by others.

3. We thus note that the time factor (point of time, period of time and time horizon) is the crucial problem for cognitive advances in basic research also. The same material-technical expenditure and the same creativity of the researchers will produce only a fraction of the cognitive advances and problem solutions if the right point and period of time is missed. It is necessary, therefore, to thoroughly analyze the reasons of any failure to achieve fundamental cognitive advances and problem solutions. At the same time this provides the criteria for the organization of scientific apparatus construction and the work of the engineering departments of basic research institutes. It must be the absolute criterion for scientific-technical apparatus construction, in cooperation with the basic researchers to produce research equipment facilitating access to new and hitherto unexplored fields of study. The yardsticks decisive for industrial production, such as labor productivity, output-capital ratio, materials and energy intensity, must be subordinated to this primary criterion.

The increased interaction of scientific cognition and advances in research equipment has a price. Fundamental cognitive advances and fundamental problem solutions require extraordinarily extensive prior performances for the creation of the necessary and qualitatively new research equipment. The costs involved are rising, as I will demonstrate by examples from medicine, nuclear research and communication technology.

In 1900, 10 mortal illnesses were known to medical science. More than half of them are no longer a serious threat, but the search for remedies to deal with the remainder is turning out to be much harder and more costly. The money needed now for cancer research, for example, not only vastly exceeds that spent on dealing with tuberculosis, diphtheria and gastritis, the amounts are also very much greater than those spent on medical research in all of human history:(12) As regards nuclear energy, the costs of research equipment for nuclear fusion are incomparably greater than those for nuclear fission. Test facilities in the field of nuclear fusion currently operating in Western Europe (the JET project in Great Britain), Japan (the JT-60 project), the Soviet Union (the T15 project) and the United States of America (the TFTR project of Princeton University) each involve around half a billion U.S.dollars. The first test reactor designed to demonstrate the technical feasibility of the nuclear fusion process and intended to be completed by the mid-1990's, will cost \$3-4 billion,(13) a sum about equivalent to the total annual spending on research and development in a medium size industrial country. It is vastly more expensive than the first test reactor for nuclear fusion in the 1940's. The advance expenditures needed for superintegrated circuits (made available, among others, by the imperialist governments in the United States, Japan, Britain and France for their 1981-1985 programs) cost in the region of \$200-300 million. The 10-year program lately adopted by the West European countries to promote research in the field of communication

technology (with the aim of catching up with the United States and Japan) provides for the spending of \$1.3 billion in the first 5 years. The money is made available by the 10 EC countries and 12 corporations, including Philips and Siemens. A new generation of microprocessors nowadays calls for advance expenditures in the amount of about \$250 million. This is incomparably more than the money needed for the first generation of semiconductors.(14)

Many more such examples could be cited. They show that new scientific perceptions and problem solutions involve enormous difficulties and great costs, simply because the less thorny and cheaper problems have already been resolved. Max Planck once pointed out this fact: "Each step forward increases the difficulty of the task, raises requirements and challenges the work of the scholar; the necessity of an appropriate division of labor thus becomes steadily more urgent."(15)

The Sources of the Contribution of Basic Research to the Innovative Powers of Science

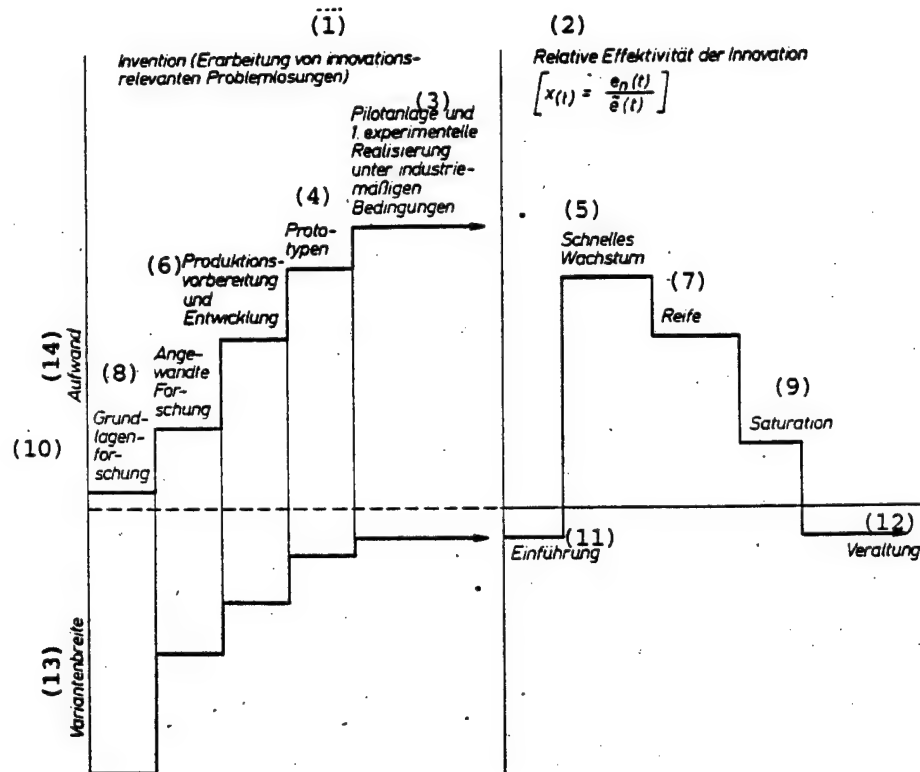
The rapidly growing prior performance needed for cognitive advances and the creation of new problem solutions have fateful consequences for the relationship between science and production to be achieved and, therefore, for the formation of scientific-technical strategies.

Society is able and willing to sustain these growing advance expenditures only if cognitive progress is combined with production progress, in other words, if the contribution of basic research to the national economy's innovative powers rises to the same extent as the prior performance required for cognitive progress. Research related strategy formation must therefore early on determine the turnover points for scientific progress, the most promising fields for cognitive advances and the research equipment to be created for that purpose. Innovation related strategy formation, on the other hand, must define the most promising fields of innovation, for which cognitive progress and problem solution must be determined so concretely and specifically that they offer an opportunity by their fusion with an existing or latent economic demand to produce an innovation. Consequently and despite their specific and particular features, these two types of strategy formation must develop in close interaction, as two components of the country's uniform scientific policy. Illustration 4 shows the close relationship and the critical points between the process of the creation of a problem solution potential (inventions) and the process of the creation, diffusion and economizing of an innovation.

We thus note that basic research must ensure the necessary range of problem solution so that such problem solutions are able to prevail in a gradual process of selection, as will make the leap from invention to innovation worth while. Normally they will only be the ones with the greatest inherent efficiency potential.

The contribution of basic research to the national economy's innovative powers is fed mainly by two sources:

Illustration 4: Relationship of Invention to Innovation



Key:

- | | |
|---|-----------------------|
| 1. Invention (working up innovation relevant solutions) | 7. Maturity |
| 2. Relative efficiency of the innovation | 8. Applied research |
| 3. Pilot plant and one experimental realization in factory conditions | 9. Saturation |
| 4. Prototypes | 10. Basic research |
| 5. Rapid growth | 11. Introduction |
| 6. Production preparation/development | 12. Obsolescence |
| | 13. Range of variants |
| | 14. Costs |

- From scientific perceptions come scientific-technological problem solutions suitable as basis and starting point of scientific-technological innovation processes. Here it is the main task of basic research to create the theoretical and methodological base for scientific-technological problem solutions in the necessary range and at a high standard, so that those problem solutions may emerge, which--in a progressive selection process--result in successful product or process innovations. Any basic research unable to secure such a range and high

standard of problem solutions, runs the danger of investment resources being earmarked for the realization of problem solutions unable to fully develop the efficiency potential of the innovations. It is the nature of the selection process that only a fraction of the problem solutions made available by basic research will result in successful economic innovations. Any cut in problem solutions may mean that precisely the most efficient problem solutions fail to be developed. The adequate range of cognitive progress and problem solutions represents an indispensable insurance for society in the case of unexpected changes in the resource situation and the innovation sequences of others;

2. From inventions made in connection with the development of a new generation of research equipment and able to be the starting point of innovation processes for production. They are related either to advances in data access, data compilation and data processing or represent the experimental realization of scientific-technological problem solutions relating to nuclear technology, communication technology and modern biotechnology, among others.

However, as mentioned earlier, advances in basic research do not automatically result in increasing the national economy's innovative powers. As I tried to show, such advances are a necessary but not fully adequate precondition.

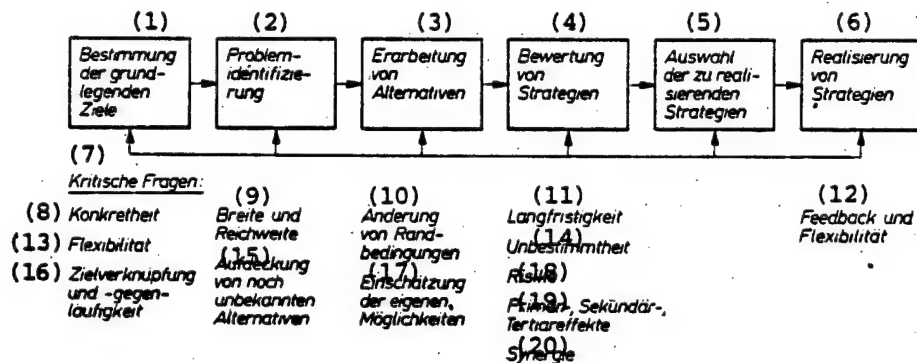
The underestimate of strategic efforts is one of the main barriers to the increase in the contribution of basic research to the national economy's innovative powers. This underestimate is revealed in the widespread belief that the extraction of strategic data is not the objective of scientific efforts but at best a byproduct which may be called upon by experts in the relevant bodies. Yet even the most eminent experts in various sciences or committees--however well constituted--cannot possibly be able to provide information about the elements of an innovation, its efficiency potential, its position in time (point of time, period of time, time horizon), its relative efficiency by comparison with existing products and processes, the comparative advantages and disadvantages of the country with regard to its utilization, the economic and social subsequent and ancillary effects in the manner absolutely necessary for strategy formation. Scientific-technological strategies must themselves be worked up scientifically. That does not come cheap and requires a developed system analytical set of tools. Still, up to 80 percent of the efficiency gain possible of achievement by an innovation depend on it.

Comparable scientific-technological efforts and problem solutions, comparable material-technical prior performances will achieve a mere fraction of the potential efficiency growth if the most favorable point and period of time for the development of dynamic efficiency is missed. The definition of the point of time, period of time and time horizon most favorable for the realization of the efficiency potential represents the main task of scientific-technological strategy formation. It is therefore not just a new term for that which used to be known as long-range conceptions, forecasts and long-range planning.

The following tasks need to be accomplished in the process of strategy formation:

- The definition of the fundamental objectives of scientific-technological efforts;
- The identification of potential but not yet discernible bottlenecks and deficit situations which determine the urgency of the innovation;
- The preparation of alternatives--how to most effectively respond to a given situation, potential changes in the resource situation and unexpected innovation successes of others;
- The appraisal of the strategies prepared from the standpoint of their feasibility, the cost/profit ratio involved, the risk inherent in them, and so on;
- The selection of the strategies to be realized;
- The realization of the strategies to be pursued.

Illustration 5: The Process of Strategy Formation



Key:

- | | |
|---|---|
| 1. Definition of the basic goals | 11. Long range |
| 2. Identification of the problem | 12. Feedback and flexibility |
| 3. Working out alternatives | 13. Flexibility |
| 4. Appraisal of strategies | 14. Vagueness |
| 5. Selection of strategies to be realized | 15. Discovery of still unknown alternatives |
| 6. Realization of strategies | 16. Target linkage and opposition |
| 7. Critical issues | 17. Estimate of own potential |
| 8. Concreteness | 18. Risk |
| 9. Range and scope | 19. Primary, secondary and tertiary effects |
| 10. Change of marginal conditions | 20. Synergy |

The creation of scientific-technological strategies requires an efficient set of tools backed by the use of modern computer equipment. Otherwise no economic appraisal of innovations is possible, nor an estimate of its secondary and long-term effects. It is an operation that can be successfully conducted only by cooperation between natural and social scientists. It is its main task to convert ad hoc and specialized scientific knowledge to strategically relevant data. This is complicated and demanding scholarly work. That is why just lately strategic groups have been or are being established at various institutes of the Academy of Sciences and the university system as well as at some combines.

As it is impossible to predict the particular scientific-technological problem solution which will sustain an "exceptional productive force," competition between several scientific-technical variants is the only possibility for making sure. We will have to consider how to organize this competition so as to materially and morally interest researchers and research collectives in testing the efficiency potential linked with their problem solutions by comparing their actual operation with existing solutions. This will require us to strengthen the strategic efforts of the research collectives themselves. Within the framework of long-term programs and projects arising on the basis of strategic assessments of the national economy's need for innovation, competition between small dynamic groups able to ensure a strong personal motivation and material interestedness of their members in the creation and implementation of an innovation has a preeminent role.

A qualitatively higher standard of strategic efforts is a basic prerequisite for resolving one of the most urgent problems in the improvement of the efficiency of scientific-technological work: The enforcement of higher performance criteria. In this respect it is particularly important for the performance criteria established within the framework of joint projects of basic research facilities and combines to arise from the objective challenges of the innovation process and its impact on the development of the efficiency and competitive capacity of the economy. Without set performance points, neither top performances nor well established priorities are possible for the deployment of investments and other material funds, for the economizing of the results achieved.

We must therefore make sure that

- The set performance points are the result of thorough strategic work, oriented to social necessities;
- The process of the drafting and appraisal of these set performance points is objectified and therefore separated from the process of the actual performance;
- The system of moral appreciation and material incentives is so organized that it is more beneficial for the researcher and the research collective to tackle risky but highly innovative problem solutions with a significant efficiency potential than work on tasks with a lower innovation standard and, consequently, a minor efficiency potential.

Moral and material incentives should therefore not begin quite so much at intermediate results (which are difficult to appraise) but rather at the final result of scientific-technological problem solution achieved, which has the potential of being the basis of an innovation process. The competition for the assumption of hard and challenging tasks by the research collectives must be concretely organized. This means scientific-technological problem solutions of crucial importance for the national economy's economic growth (for example in the fields of microelectronics, robotics, flexible automation, coal processing, nuclear energy, modern biotechnology and new materials) must involve such incentives as accord with their strategic place value in the development of the national economy. Such priorities can be established only on the basis of scientific-technological strategy formation within the framework of the target-program planning of scientific-technological progress.

FOOTNOTES

1. K. Marx/F. Engels, "Total Collected Works (MEGA)," Vol II/3.6, Dietz Verlag, Berlin 1976, p 1973.
2. See K. Marx/F. Engels, Collected Works, Dietz Verlag, Berlin 1956-1968, Vol 23, pp 337 and "Total Collected Works (MEGA)," op. cit. , Vol II/3.1, p 293.
3. On the detailed deduction of the coefficient of relative efficiency see H. Maier, "Scientific-Technological Innovation Processes, Efficiency and Strategy Formation," WIRTSCHAFTSWISSENSCHAFT, No 11/1981, pp 1317ff.
4. E. Honecker, "Bericht des Zentralkomitees der Sozialistischen Einheitspartei Deutschlands an den X. Parteitag der SED" [SED CC Report to the Tenth SED Congress], Dietz Verlag, Berlin 1981, p 49.
5. See K. Marx/F. Engels, Collected Works, op. cit. , Vol 24, p 109 and Vol 25, p 265.
6. A detailed analysis of these four groups of problems may be found in the study "Problems of the Improvement of the Efficacy of Research Performances of Academy of Sciences Research," directed by H. Maier, Institute for the Theory, History and Organization of Science by the GDR Academy of Sciences, Berlin 1983.
7. K. Marx/F. Engels, "Total Collected Works...", op. cit. , Vol II/3.6, p 2166.
8. Ibid, p 2162.
9. Ibid, p 2060.
10. K. Marx, "Grundrisse zur Kritik der Politischen Oekonomie" [Outlines on the Critique of Political Economics], Dietz Verlag, Berlin 1953, p 439.

11. K. Marx/F. Engels, "Total Collected Works....," op. cit., Vol II/3.6, p 2262.
12. See N. Rescher, "Wissenschaftlicher Fortschritt" [Scientific Progress], Frankfurt/Main 1981, pp 92f.
13. See FINANCIAL TIMES, 24 November 1982.
14. See INTERNATIONAL HERALD TRIBUNE, 6 May 1982.
15. M. Planck, "Vortraege und Erinnerungen" [Lectures and Memories], Stuttgart 1949, m p 374.

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HUNGARY

POSSIBLE NEW MANAGEMENT, TRADE UNION CLASHES NOTED

Budapest MAGYAR HIRLAP in Hungarian 7 Mar 85 p 5

[Round-table interview with industrial managers Jozsef Mihalyfi, Mrs Gyozo Petersilka, Istvan Pupek, Mrs Sandor Veszeli, Dr Antal Jekkel and Tamas Wittich by the MAGYAR HIRLAP in its editorial office, date not given: "Who Can Decide What? Modifications of the Management System of Enterprise Democracy"]

[Text] Shortly after publication of the high-level legal regulations concerning the new forms of enterprise management the schedule of conversion took shape. According to it this year in more than one-third of the industrial enterprises, in about 140 enterprises will a new form of enterprise management be introduced. In the majority of the reorganized enterprises an enterprise council will be set up, and in 40-50 units the enterprise will be managed by the general assembly or delegate assembly of the workers. The conversion program will be continued next year and finished by the end of 1986. According to the plans, out of the 314 enterprises managed by the ministry of industry only 10-12 percent will remain under direct supervision by state management. In the new forms of enterprise management--since employer's rights are exercised by the enterprise council or, rather, by the general assembly or the delegate assembly--the position of the managers is fundamentally changed, but the trade unions' sphere of action is accordingly modified also, because the new forms of direction strengthen the group interests within the enterprise. How is the system of connections, the cooperation between the enterprise council and the trade union forums being envisioned?--this is the question about which we are having a round-table conference in our editorial offices. The participants in the conference are: Jozsef Mihalyfi, manager of the Albertfalva Spinning Factory; Mrs Gyozo Petersilka, trade union secretary of the Albertfalva Spinning Factory; Istvan Pupek, factory unit manager of the United Chemical Works; Mrs Sandor Veszeli, trade union secretary of the United Chemical Works; Dr Antal Jekkel, deputy section head of the ministry of industry and Tamas Wittich, section head of the Clothing Industry Workers' Trade Union. Our editorial staff was represented at the round-table conference by Karoly Ban.

Magyar Hirlap: It is known to the enterprises that management forms are proposed by the minister of industry and that a collective has four months in which to accept or reject such a proposal. Institutionalizing the deliberation, discussing the proposal is the task of the trade union. How was the reception of the new forms of enterprise management?

Mrs Sandor Veszeli: At our place, in the United Chemical Works the collective accepted with a single abstention the minister's recommendation, that is, setting up an enterprise council. Of course, there were also some scruples which can summarily be condensed into one question: can this step be expected to bring an upswing, or is only the name of the "child" being changed? Because if only the latter is happening, then what is this whole thing for? By the way, we have done some work ahead of time, we have already prepared even the organizational and operational bylaws. We have also talked about how many people the enterprise council should consist of? Well, the organization will have 16 members, nine will be elected by the workers' collectives, and four--on the basis of the organizational and operational bylaws--will be appointed to the body. The workers have also accepted this proposal.

Jozsef Mihalyfi: In the Albertfalva Spinning Factory, which employs not quite 200 people, the collective voted for a delegate assembly. We are not yet as far as the Chemical Works, thus the organizational and operational bylaws have not yet been prepared, yet I would like to talk about them now, anyway, because I feel that this can be the key to the success of the new organizational form. First of all, in the new bylaws the roles must be clarified more precisely than before, in other words: Who decides what? What is the task of the manager, the delegate assembly, and the trade union? If we can clearly draw these lines, then it will also be easier to decide which representative of which position should get into the body and which should not, for the express purpose of preventing extraneous arguments and fights for prestige--the organizational and operational bylaws make this possible.

Mrs Gyozo Petersilka: Experience shows that workers prefer to elect "loud-mouthed" people as trade union stewards, those who are able to pound the table in questions of wages and in social questions. To be a member of the delegate assembly, is, however, a totally different matter, in this position vocational competence, an ability to synthesize are much more important. Question: Will the workers' collectives recognize this or not when the time comes to elect the delegates?...

MAGYAR HIRLAP: From the employees' point of view obviously the presence of those people is desirable in the enterprise council or the delegate assembly, who can best enforce in management the interests of the given community. Question: Will the employer be happy about that?

Tamas Wittich: Your way of posing the question is not good. Namely, one must start with the fact that the new management forms are basically bodies conveying employers' decisions. And those who get into this body as representatives of the workers must serve not the part interest of the organ sending them but the interests of the enterprise. Let us, therefore, not confuse their commissions with the functions of the democratic forums. The latter, naturally,

continue operating in the same manner as up to now, at the most the methods, the forms can change in time. If, say, on Tuesday a decision concerning the entire collective is put before the enterprise council, that would be discussed in the same manner on Monday by the steward body. Indeed, the transfer of employer's rights does not change the trade union's right to concur, to give an opinion and, in certain questions, to veto.

Antal Jekkel: I think, it is not an illusion that a member of the enterprise council should represent the interest of the enterprise as a whole, even against the part interest of the division sending him. And to show how much this is not an empty phrase, I will tell a story. Last year one of the enterprise managers enacted, so to speak, the new organizational form. Parallel with the official forums of decision he called together the most experienced workers, he gave them the information needed for the decision. After a while the manager made a test by comparing the point of view of the official forums with that of the "ad hoc" body. And now, are you sitting down? The latter knew more precisely the export tasks, domestic production, material supply than the people sitting in the official bodies...

Magyar Hirlap: Your example is remarkable, yet one cannot forget that the workers' short-range interests concerning the given collective are stronger than the long-range interests. Consequently the delegate forgetting this can get in conflict with those who elected him. You might say that his "delegate consciousness" may clash with his "trade-union consciousness."

Istvan Pupek: To be sure, I admit that the short-range interests of the workers are in general stronger than the long-range ones, but this is not the fault of the enterprise management form. Your train of thought can, however, also be turned around. Namely, the fact that the worker's elected representative is present in the management of the enterprise, participates in strategic decisions, can improve the possibility of communication. It can be assumed that he will be better able to convince the collective of the division than the manager can, they will more easily believe him: why did they decide the way they did.

Jozsef Mihalyfi: I'd like to give an example. If in our factory the delegate assembly must decide whether it will use the profits to buy machines for 15 million forints or whether it will use this money for wage development, then the short and long-range interests of the workers are conflicting with each other. If we do wage development, then things will be better tomorrow, if we buy machines, they will be even better the day after tomorrow. Well, in preventing the delegate assembly from automatically rejecting the second variation, the trade union has, after all, an important role. It must nominate to the delegate assembly a person who--in a justified case--is able to suppress the short-range interests.

Mrs Gyozo Petersilka: In the preparation the role of the trade union is a double one. Not only those who are elected need to be prepared, the same applies to the electors themselves. In enterprise management based upon self-government it is indeed of significance who gets into the body. I do not think this needs any explanation.

Magyar Hirnap: Can it be expected that the new forms of enterprise management will modify the management system of enterprise democracy?

Tamas Wittich: As of today one cannot answer this with a yes or a no. As a basic principle though, one can say at least that if a topic belongs to the sphere of authority of the enterprise council, then the manager is duty bound to take it before the steward body. There are two possible cases. One: the proposal of the representatives is accepted. Two: it is disregarded in the decision making. For the time being it is not yet clear what the situation is if in the question scheduled to be decided the trade union has right to concur? Can the decision become valid or not? If not, then the operation of the enterprise may become inflexible; if yes, enterprise democracy is being damaged. Practice will in time find answers to these questions also.

Mrs Sandor Veszeli: In my opinion, there is no need for new forms in the trade union movement. Two questions, however, must be answered in any case. With what questions and to what depth should the enterprise council occupy itself? And in what manner does all this have to do with the rights of the representative body? At the Chemical Works, for example, 70 percent of the wages is basic wage and 30 percent is sliding scale wage. This is a decision in principle. Under such conditions the trade union can freely decide as to the differentiation. The question is whether it is necessary to limit the division of the wage to such an extent, or whether deciding the proportion between basic wage and sliding scale wage should be an exclusive trade union task? There are arguments about this--and, as far as I know, not only at our enterprise.

Istvan Pupek: The management system of enterprise democracy does not necessarily have to be changed on account of the new forms of enterprise management, but in this context the trade union must strengthen the representation of group interests. For this is the guarantee that within an enterprise the specific interests of the various groups get into the information system of the enterprise, helping with the decisions of the enterprise council. Furthermore, the trend in the organizational development that independent accounting units should be created in the producing organizations encourages the strengthening of group interest representation.

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HUNGARY

MISMANAGING A POTENTIAL HARD-CURRENCY EARNER

Budapest MAGYAR IFJUSAG in Hungarian 22 Feb 85 pp 9-11

[Article by Zoltan Acs: "Hollohaza Lies Far"]

[Text] Hollohaza lies far from Budapest. I tried three times to reach the Szasz Studio by phone. On each occasion, after waiting half a day, I was obliged to tell the operator to cancel the call. Letters and telegrams were the last resort. Having changed my schedule three times, I finally boarded a train at dawn of a frosty December day. Hollohaza lies far even by train. The express takes you as far as Szerencs. From there you take the local train to Satoraljaújhely, a one-hour ride. If you happen to catch the intercity bus, you are able to cover the remaining distance, nearly 30 kilometers, in one hour. If you catch the bus

I was lucky and did not have to wait for the bus. I barely got off the train in Satoraljaújhely when I spotted my friend. He came to fetch me by car.

"Endre Szasz is not really well," my friend greeted me. "He recently had an attack of chest pains. But that is not the only reason why he is embittered. There are also the walls. But he probably will tell you all about that himself."

Along the way I learned that one can only drive into Hollohaza and turn around. Together with 16 other villages, it lies in a dead end. A 5-kilometer stretch of highway, not yet built, prevents you from driving out at the other end of the village. When this stretch between Kéked and Hollohaza will have been completed, the travel time to Budapest by road will be reduced by 1 hour. But this stretch of highway is not being built, even though the residents of the two villages have volunteered their labor, I was told. But labor alone is not enough. Money, too, is necessary. And that is not in abundance at present. So everything remains the same as before.

Before a tour of the Szasz Studio's new plant section, which had been commissioned at the end of last year, my friend took me to my accommodations, at the top of the village.

"I just received the keys to the apartment two days ago. Do not be surprised, therefore, if you do not find it too comfortable," my friend apologized.

"So you finally got the studio apartment that was promised you two years ago," I said.

"Well, this is not exactly the studio apartment. For that I would have had to wait a few years more, because not even the foundations have been poured as yet. This is a service apartment that the factory has allotted me. It will do until the studio apartments are built. If they ever are built."

I learned from other sources that there would indeed be a long wait. The building estimates were prepared two years ago, and it was believed that the studio apartments could be built at a cost of 16 million forints. The top officials of the megye took their promise seriously and transferred 6.0 million forints to the factory, for the construction of the apartments. Endre Szasz pledged 8.0 million forints for this purpose, from the proceeds of the art works already sold and to be sold in the future. This no small sum would have been advanced by IPV [Travel and Advertising Enterprise], provided it obtained the right to market Szasz products. But the enterprise did not get this right and had no interest in advancing 8.0 million forints. Thereafter the director of the Hollohaza Porcelain Factory went in vain to IPV to sign a contract. But as there is no legal relationship between them, it appears that the millions are not available. And the factory itself does not have even a plugged nickel for this purpose. At the beginning of each month, the factory stands in line at the OTP [National Savings Bank] to be able to meet its payroll on time. All that the factory is able to offer is its construction brigade.

When 6.0 million forints were already available for the studio apartments, why did they not start construction, so that at least some of the apartments could have been built? We can accept the factory management's reluctance to start construction when only half the money was available. But that was two years ago, and prices have risen since. And now it seems that it will be necessary to choose an incomplete solution after all. A new plan has been prepared that calls for building Endre Szasz's unit first. Its present estimated cost is 7.2 million forints. Thus the plans are ready, the factory's construction brigade is free, only more than a million forints is still lacking. Until the studio apartments are ready, everyone lives where he can. My friend is lucky. He married a local girl, and thus he has been able to get a service apartment more easily.

We toured the new shop building. It was striking how few people were working in it. Since I know nothing about making porcelain, I thought that this was because everything was mechanized. It turned out only later that this was not the case at all.

Before entering the master's workshop, I stopped in the restroom. No water came from the faucet. My friend was not surprised. He led me to the section of the studio where the patterns designed by Endre Szasz are enlarged and transferred onto porcelain plates, jugs and vases. This is artistic work for which water is essential. My friend turned on a faucet. It emitted only dying gasps, but no water.

The master truly did not look well. As he is famous for his self-tormenting work intensity, I expected to find him at work. I was mistaken. The doctor was with him, to give him his daily injection.

He told me not to call him master. He did not like it. The true, old meaning of this word had already become trite.

We agreed to continue on a first-names basis. He noticed that I was looking at the doctor.

[Szasz] I have already had three coronaries since coming here. It is all due to nervousness. I have always wanted to redeem the world, but now I am suddenly fed up. I am constantly bumping into walls. Look, this small country has spent millions on our experiments here. For me the construction of this new shop building has been a serious dream. It took me much running around, and many telephone calls and meetings, to have it completed. You have seen it, it is here, but I am still not happy and satisfied.

[Acs] Why? Are you lacking special skills?

[Szasz] Believe me, this could be one of the finest porcelain factories in the world. Forty-five percent of the blue-collar workers here are first-rate craftsmen. They learned this craft for generations and carried on the tradition of making porcelain. The whole thing is practically in their blood. The engineers, too, are excellent; even the technology is acceptable; only the factory's management is helpless. The main problem is that the director does not trust his people. I predicted already two years ago that the factory, with this management approach, would go bankrupt.

Here in Hollohaza, where up to now only corny shooting-gallery pottery has been produced, there are specialists able to make porcelain that can match in quality the porcelain produced in China 5000 years ago. Where else can they make 80-centimeter porcelain plates that are thin? Nowhere. But the people here can make them. If anywhere, morale is good here.

The Szasz Studio began initially with 14 people. We produced and sold an enormous volume. This section of the factory would require 450 people, but we have at present only a third of that number. The factory's management has simply failed to recruit enough labor in due time, and has made no provisions to train the workers. Not enough manpower is available locally? Perhaps. But there is manpower in the surrounding villages. Keked is not far away. The men would gladly come to work in Hollohaza, but that damned 5-kilometer stretch of highway has not been completed. And I have contacted even the ministry in this matter. The ministry gave its blessings, and nothing happened. We have 140 men working here, by transferring them from the rest of the factory. The foreman and the engineer are lugging porcelain and attaching the transfers. What kind of organization is that? Abroad you can hardly imagine a factory today without air-conditioning. Do you think the capitalist would install air-conditioning if it were not worth the cost? Here in this room, where I work, it is always either too cold or too hot.

Tell me, how are we supposed to win ever-newer foreign markets when, in the seven years since I am here, it has not happened even once that the factory has been able to ship a complete order on schedule? You don't believe me? Then listen. A Norwegian company offered to hold an exhibition for us in Oslo. If the exhibition proved a success, the company was willing to organize our

market in entire Scandinavia. It ordered merchandise for 100,000 dollars. The factory was able to ship only 30,000 dollars' worth; not what the company had ordered, and even so the shipment was late. In spite of this, the exhibition was a success. The Norwegian minister of culture opened it, and it was shown on Norwegian television. Sales of porcelain the first two days totaled 20,000 dollars.

You probably remember my show in the Municipal Concert Hall during the Budapest Spring Festival. It was I who persuaded the organizers to show porcelain, instead of oil paintings. Sales totaled 18 million forints. Of which I received 640,000, the factory got 5.0 million forints, and the rest went to the Fine Arts Fund. The 5.0 million forints could have been used as, say, an advertising budget. And what did the director do with it? He pooled it with the factory's assets. The factory has no money whatsoever for advertising. Well, never mind. Recently CBS, the largest television corporation in American, was preparing a one-hour documentary on Hungary. They looked me up, as an oddity of sorts, because I am crazy enough not to have applied for American citizenship as yet, even though I am successful. I told them that if they were already here in Budapest, they might as well hop over to Hollohaza, it was not far. Although Americans are used to greater distances, they had not expected the short hop to be 300 kilometers. They were disgruntled, but I conned them into filming also the factory, so that they would be advertising not only me but Hollohaza as well. They did so free of charge, although a 16-second commercial on CBS costs 500,000 dollars. The only trouble was that I could not get hold of the man I wanted. He was testing his new car somewhere.

Douglas, too, wanted to do business with us. It would have bartered helicopters for porcelain. Tiffany, world famous primarily for its jewelry, also sought us out. It brought together in Los Angeles 30 Western managers to see our wares. They were interested not so much in our finished products, as in our catalog. Every businessman knows that he needs a catalog in which his products look nicer than in reality. The Fine Arts Fund ordered the catalog from IPV, which had the catalog printed in an Italian printing plant. The colors turned out horrible! Cobalt blue, for example, looked grayish black. Not to mention that on my photograph I looked like a grandmother darning socks the day before her death. Thus the catalog was not released, and the business deal fell through.

The company of an American beauty queen came and offered to conduct scientific market research to gage the prospects of Szasz porcelain in America. All we had to tell the company was how much lead time we needed to fill orders. The study was completed in three weeks, and we received a bound copy. And we have not shipped anything so far.

Recently an Australian customer wrote requesting a catalog. We told him we had no catalog, but sent him photographs instead. On their basis, he placed a trial order for two plates. I have now been home three months, but I am not yet certain that the factory has shipped the plates. Advertising is up in the air, and everything is falling apart. Then you wonder why I look ill.

You probably have heard that the Szasz Studio has bankrupted the factory. If you have not heard, then you are hearing it now, from me. For this is what

is being said. The only thing I am unable to understand is how can 50 people bankrupt a factory with a total work force of about 1500? The trouble is that they are producing shooting-gallery pottery in large series, and even that at a loss. Do you know what they want to make now? Strawberry mugs! And a dinner service that will cost the factory 28,000 forints to make, but will allegedly be sold for only 14,000 forints.

I do not want to force corny porcelain on people. The Hungarian public is sophisticated enough for me to paint uncompromisingly. The more people understand a picture, the greater society-forming force it becomes. A work of art is born in human hearts, if it reaches that far. I am convinced that fine art can be studied only from pictures. A person may have an appreciation of music and literature from home, but not an appreciation of fine art, because you are unable to hang a Rubens on the wall in your apartment.

The interview was interrupted repeatedly. Hungarians and foreigners, friends and strangers came on one another's heels. The factory director also appeared, guiding several visitors through the studio. I took the opportunity to arrange an appointment with him for 9:00 the next day.

He received me in his office and called in one of his senior managers, so that we would not be alone. Having heard that he would like to see the factory bankrupt, I asked him whether that was true.

[Director] (After hesitating briefly.) Not at all. But the fact remains that our new investment cost 184 million forints, and so far it has not fulfilled our expectations. Admittedly, it was commissioned only a month ago.

[Acs] But why is the new plant section not operating at full capacity?

[Director] We are having manpower problems, and at present we have enough people to man only one shift.

[Acs] Why have you not recruited enough workers in due time?

[Director] The factory here was very overcrowded, and it would not have been possible to accommodate more people for training. We had to transfer skilled workers with 5 to 10 years of experience to the new section, and even so there are many problems with the material. Decorations can be painted only on porcelain that is entirely free of any defect. At the same time, we are unable to make full use of our firing capacity with the Szasz Studio's products. Today we are wiser than we were 3 years ago, when we undertook the investment. It is not certain that a second shift will be necessary.

[Acs] Excuse me, Mr Director, but how is it possible that the Szasz Studio does not load enough capacity? What I have just heard is that there are many foreign orders which you are unable to fulfill.

[Director] That information is not correct. When the artist hears of inquiries about his works, he already regards that as a deal, as cash in the till. Furthermore, we do not have the right to market. The Fine Arts Fund Enterprise

markets the products of the Szasz Studio. Even now we have 7.0 million forints receivable. (By the beginning of 1985, this amount has been reduced to 3.0 million forints.)

I asked the director whether he knew of the latest inquiry from Japan. Endre Szasz himself showed me the telex. It had arrived not that day, but a week earlier. There must be something very wrong somewhere, because the director --after consulting his secretary--told me that he had not heard of that telex. But one thing is certain: the factory's management and the Szasz Studio are not pulling together. The factory is still giving preference to its traditional products that Szasz calls shooting-gallery pottery. According to the director, these traditional products are easier to sell and require no advertising. There must be something wrong with this approach, because the factory would like to make 45 percent profit on Szasz products, although it has not yet been able to achieve this profit level. The profit on the traditional products is only 10 percent. Admittedly, there is no risk involved, and these products do not require work of high quality. And why should a factory concern itself with developing appreciation of fine art? Another argument that the factory could advance is that the shooting-gallery pottery is still cheaper than Szasz porcelain. The management would like the Szasz Studio to operate at 70 percent capacity already this year. Which means an output of between 60 and 70 million forints.

According to the director, the responsibility is theirs, and it is they who must assume the risk. But my stay in Hollohaza convinced me that, to the contrary, there is no question of assuming any risk. Today no one can doubt that the Szasz products could be sold, both at home and abroad, in much greater volume than what the Hollohaza Porcelain Factory is cautiously making.

On the first day of my stay, an old friend of Endre Szasz turned up with his family for an unexpected visit. They had not seen each other for years, and the reunion was obviously a happy one. Recollections of shared memories relaxed the artist's tension. That same night he worked at his customary pace, painting four beautiful pictures.

My new-found friends took me back to Budapest in their car, together with the four pictures painted the night before. As I looked at the four pictures, it struck me that they were worth more than the car itself. The name and art of Endre Szasz are indeed world-famous. One would only need to know how to make use of them.

As I looked at the frost-covered landscape we were driving through, I recalled what my friend in Hollohaza had said: Szasz is unable to hop to Budapest for everything, and Hollohaza is far away.

1014
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HUNGARY

FATE OF FORMER CSEPEL TRUST UNITS IN DOUBT

Budapest MAGYAR HIRLAP in Hungarian 23 Mar 85 p 6

[Article by Kristof G. Kocsis: "The Autonomous Csepel: Grounds for Optimism-- People Are Earning More"]

[Excerpts] One and a half years ago the trust structure of the Csepel Iron and Metallurgical Works was dissolved. We now talked with the managers of some of the Csepel enterprises about their experiences with autonomy. We summarize in this article the opinions of Dr Antal Tari, chairman of the Industrial Center of Csepel Works, Gyula Juhasz, manager of the Metal Work and Nandor Kocsis, manager of the Iron Work, Gabor Hajnoczy, technical manager of the Machine-Tool Factory and Dr Erno Marjai, deputy financial manager of the Iron and Steel Foundry.

The last one and a half years was long enough to strike a balance. Everything seems to point to the fact that the recovery was successful. The former member enterprises of the Trust have increased, between 1983 and 1984, their output by 1.3 billion forints. Their ruble-paid export has grown by 18 percent and their export to capitalist countries by 21 percent. What is even more noteworthy, the profits of the enterprises have increased by 200 percent.

However, to what extent could all this progress be ascribed to the move toward independence? In this respect opinions go more or less asunder.

Despite the differences in the atmospherics of the opinions, the separation of the enterprises from each other is considered a favorable development. Everybody also agrees that the scope of flexibility of the enterprises has grown, and since successful business operations are increasing their income and failures may cost their skin, managerial responsibility has been strengthened, the enterprises have become more watchful over their expenditures, the modernization of the product structure was developed quickly and the factories are increasingly meeting the demands of the market.

Favorable Changes

The willingness of the Csepel enterprises has become more manifest and this is not only because it is no longer compulsive. Only since it became independent did the Iron and Steel Foundry, for example, become a reliable business partner of Raba, which has always been one of its major customers. Nowadays the

special crank-case alloys for the Raba-MAN engines are being regularly delivered on a daily basis, and thus Raba of Győr has been able to liquidate its large stock of this commodity, which has been needed for a long time. For the Foundry the qualitative change was caused by the fact that now it can do business at realistic prices even with its Csepel partners. For the Trust exercised in its dealings within the giant factory complex the functions of price authority as well as a consequence of which part of the Foundry's products were sold below market prices. Thus, while one kilogram of machine-tool alloy was sold beyond the factory gates for 36-40 forints, the Machine-Tool Factory of Csepel bought it from the Foundry for only 25-30 forints.

There is however one thing which preoccupies the managers of almost all factories since the very moment of independence, i.e. the amortization of their debts. Although the move toward independence was preceded by a financial settlement which saved the enterprises from instant crises, many of them inherited the full liabilities, without a penny of amortization effected by the Trust. The Machine-Tool Factory, for example, had set up the Drilling-Machine Factory of Nyírbátor using loans from the Hungarian National Bank. This investment was completed in 1978-1979, and it should have been amortized since then. Yet, although the Machine-Tool Factory paid regularly its dues to the common pool, its 600-million forint debt was not a penny less when the factories became independent.

A largely similar ballast weighs upon the Iron and Steel Foundry. Its 280-million forint liability has been rescheduled until 1989. Also the Metal Work has to carry its debts of 1.5-billion forints until 1991, and the Iron Work has a state loan of 1.5 billion forints and a bank loan of 180 million, which expire only in 1988.

As things stand now, after the amortization of their debts the Csepel factories will have precious little left from their profits for investments, during the years to come. Yet continuous technological development is a condition of their survival. For the time being the optimism of their managers seems nevertheless unbroken.

In the Machine-Tool Factory managers try to improve marketing: they accept orders with a 6-8 months deadline, while other enterprises are asking a one year delay for similar orders. They can do this only by taking risks, for example they prepare certain kinds of modules in advance, without any order at hand. A series of stock-building and cost-saving measures have been taken in this factory. Its managers are improving the exploitation of the factory's capacity, eliminating the building of the tool manufacturing unit, the maintenance of which had cost 6-8 million forints yearly. They have introduced new business ventures in an attempt to acquire new customers among the enterprises which are short of cash, they have established a leasing enterprise with a capital of 50 million forints, and organized a service of general repair for their own earlier products.

Strength for Accommodation

As a result of these measures the factories in question got rid of their stigma of low efficiency. While their resource-related profits in 1983 were

only 3.5 percent, in 1984 they amounted to 7.9 percent, and for the current year they could promise 9-9.5 percent. In terms of their development plans they wish to participate in such priority programs to which some government subsidies will be forthcoming. These include the development of flexible manufacturing systems, unmanned manufacturing tools and ultra-precise processing machines.

Managers of the Iron Work have also set such primary development targets for the 7th 5-Year Plan which fit into the industrial bloc conception. Taking the current needs as their starting points, they are planning small steps in development. In the tube-welder, as well as at the rolling trains they will introduce stretching-reducing technology, through which they can counter-balance the decrease in staff and can increase the output. Shortly they will put their forging robot system in operation which will increase the output by 30 percent and will improve quality at least as well.

In the Iron and Steel Foundry managers expect increases in lucrativity by changes in the product structure. They plan to increase the percentage of spherical graphite alloys. Last year they already introduced 160 new products whereby about 15 percent of their product structure has been renewed.

In one word, the newly independent enterprises are not lacking of promising plans. However the clouds have not yet cleared entirely. As Dr Antal Tari, chairman of the Csepel Industrial Center, emphasized in his recent lecture on "The Forty Years of Our Industry," those enterprises which carry the burden of major investments, may appear ineffectual in the optics of the new economic regulators. It is to be feared that the machine industry enterprises of Csepel will have to face the problem of lack of base. Everything depends on whether their independence will provide them enough stability to flexibly accommodate themselves with the regulators.

Ferenc Seitz has been working in the Machine-Tool Factory since 1951. He is 48 years old and father of two children. Since 1980 he has been party secretary of the basic organization of the body-shaping unit. He works on a digit-control alloy working machine. About the independence of the factories his comments are as follows:

In our workshop nobody was happy when we heard the news that the factories were going to split. During the first months of independence we got acquainted with a phenomenon unknown to us until then, suddenly we had no work. Our people wanted to leave since in the agricultural producing cooperatives and in the private sector they could earn 1-1/2 times their current wages. We have managed to keep our collective together by accepting paid work from outside. In this way our factory earned, as early as the second half of 1983, 12 million forints more. Little by little we have learned to work with smaller orders having to reorganize our work force time and again. The paid work yielded 30 million forints as an additional income already in 1984. It was worthwhile because our workers started getting more satisfaction since the beginning of 1983, largely thanks to the enterprise business work partnerships. They are earning usually an extra 4-5000 forints, in addition to their 6000 forints monthly salary. Everybody could join the business work partnerships, where it is the per capita output alone that counts. This is favorable to the

young people above all. We badly need this since nowadays the metal cutting trade has lost its reputation. Out of those who are working in our factory 84 percent have been with us at least for 15 years. But we feel that this year we have straightened out our difficulties and our management has ascertained the right product structure that will steadily provide us with work.

12312
CSO: 2500/309

HUNGARY

HOUSING SITUATION IN BUDAPEST DESCRIBED

Budapest MAGYAR HIRLAP in Hungarian 14 Mar 85 p 5

[Article by Agoston Braun: "Rental Buildings in Budapest: They Are Demolishing and They Are Building"]

[Text] For a long time, experts used to claim that an apartment building has an average life expectancy of 50 years. In contrast to this, nearly one quarter of the rental units in Budapest are 86 to 100 years old, and at least half were built between the turn of the century and 1955.

The Chief Directorate for the Handling and Building of Real Estate Property in the capital city classifies the houses of Budapest into four categories. In the first category are those that were built since 1955, and thus are registered as new. These are followed by houses built before 1955 but already renovated, thus also in good condition. The third and fourth categories cause the most headaches, since those contain the dwellings which have been in use for the longest time, have never been renovated and are condemned to be demolished. If we consider the fact that more than 100,000 rental units are located in buildings which are 86 to 100 years old and that there are almost 19,000 condemned and emergency dwellings which can't be called homes, then we have some idea about the magnitude of the tasks ahead.

150,000 Dwellings in 606 Blocks

What characterizes the majority of apartment buildings [slums] built around the end of the last century? Dwellings without comfort features, consisting of one room and a kitchen, which have only a spigot and communal toilets found at the end of the corridor. These are the buildings most likely to be characterized by propped-up ceilings and outside walkways leading to the apartments that are braced up with timber, and these are the places where the repairmen have to be called out daily to fix the crumbling, patched-up lines. This explains why during this year and in the course of the seventh five-year plan, it will be the priority task of the real estate management enterprises to make up for decades of delay and to remodel or eliminate more and more apartments without comfort features and emergency dwellings. It is indicative of their work tempo that, together with the Real Estate Management Enterprise [of Budapest], they can and will eliminate the braces supporting the ceilings and the walkways by the end of the next five-year plan.

During the last year the number of emergency dwellings was reduced by 3,500, and in the past four years 10-11,000 dwellings have been renovated annually. The so-called block rehabilitation will continue during the seventh five-year plan. This means that in any given area not only the building groups will be remodeled in accordance with modern requirements, but the infrastructure will also be updated. In the experimental region, the 7th district, the new apartments of the old buildings will probably be ready this year, and next year the gaps [in the streets] will be filled. The experiences gained here, and in the course of similar activities in the 6th district, will be combined and unified in a rehabilitation code. That book will become the useful guide for all future undertakings--there will be plenty of them--since the preparations are already under way. This year the capital city will spend 100 million forints in order to assure that as of 1986 work should proceed even faster and more accurately than before.

In this respect, block rehabilitation projects and the elimination of the dwellings without comfort features are interrelated. The difference between the two is that while in the case of the latter it is sufficient to include one particular house, block rehabilitation calls for the simultaneous renovation of entire streets. This type of action will bring about serious changes in the 5th, 6th, 7th, 8th, and 9th districts, and the so-called Hethaz [Seven Houses] block of the 13th district can also be placed in this category; it has been included with the present tasks on the basis of a case by case determination. Here are a few more numbers to illustrate the magnitude of the challenge: In Budapest, over a period of approximately 30 years, they are planning to remodel and modernize almost 150,000 housing units within 606 city blocks. Thus the completion date falls beyond the end of the millenium; but this does not mean that in the meantime nothing will be done to these houses. It is prescribed that their condition must be continuously protected and improved. If this were not to happen, then, during the final phases of the program, these buildings would have to be demolished instead of remodeled.

To return to the ongoing elimination of dwellings without comfort features, there are about 300,000 people presently living under these conditions. Their cases are the most urgent, because it may happen--as it did during the period of extreme winter cold--that they can't even use the toilets, because the pipes freeze. In temperatures of minus 20-25° centigrade and during the thaw, there were weeks when the repairmen had to fix 1,800 problems in these houses.

What Is Economical?

The expenses are not small: Even when--thanks to the larger size of the dwellings--renovation is possible inside, and an inside toilet and a shower can be added to the unit, this can cost 30-50,000 forints. If two or three dwellings have to be turned into one or two larger ones, the above expenses may be multiplied; at the least, this will amount to 100-150,000 forints. In addition, a case like this can bring up additional problems. "Who should move back into the new units, and where should the others receive a suitable home?" It is not even certain that all the residents desire the comfort features, perhaps they can't even pay for them. As for elderly people, they would rather accept an apartment without the conveniences--at a relatively lower cost--just so they can remain in the neighborhood.

The situation appears to be simpler in the case of apartments that have been condemned to be demolished, but--as we found out in time--this is not the case. To begin with, according to Gyorgy Sulyok, assistant director of the Capital City Council's Chief Directorate for the Handling and Building of Real Estate, the number quoted earlier in this article is unrealistically high. The reason for this is the fact that a considerable percentage of these dwellings appear on the condemned list because, on account of, let's say, the expansion of a large tenement project, construction is prohibited in their immediate neighborhood. In other words, these dwellings cannot be enlarged or modernized. As of this year, we can expect improvements in this area, because the strict application of poorly interpreted laws will be removed from those dwellings that can be saved. The criterion of economy has also changed: Earlier, the limit was set at 65 percent of a new apartment's cost, but as of now, a building may be preserved if its renovation costs less than the combined expenses of demolishing and relocating the residents. (If the structure has historical or aesthetic significance, then the expenses become even less decisive, and the house has to be preserved at any cost.)

It Can't Deteriorate Any More

Well, after all of this, there are still approximately 7-8,000 dwellings in the capital city that are condemned to be demolished; in these cases, the schedule for removing the residents is determined by two factors. One is that every year 4-500 individuals can acquire suitable homes, as determined by the special budget set aside for the purpose of eliminating the most urgent worries. The other is the rate at which the number of new dwellings increase. (The inhabitants of condemned apartments also have their names added to the waiting lists.) The capital city gave this program a priority even higher than that of eliminating dwellings without comfort features, but a completion date in this case is more than five years away. That is, of course, if among the houses presently considered salvable, none deteriorates to the point of having to be condemned. . .

12588

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HUNGARY

FUEL RESTRICTIONS HURT CHEMICAL COMBINE

Budapest NEPSZABADSAG in Hungarian 22 Mar 85 p 3

[Article by Judit Kozma: "Will the Shortfall Be Made Up in the BVK
[Borsod County Chemical Combine]?"]

[Text] "Whatever we fail to produce today is lost!" The sign is emphasized by a big exclamation mark at the end on the wall of the conference room of the Borsod Chemical Combine. Considering that a continuous operation is involved where, except for maintenance, the equipment operates practically all the time, the slogan which at first seems a general wisdom of life may even be treated as a fact. However, this does not really suit the situation well--since we are discussing the possibilities of making up production lost due to the harsh winter and to the energy limitations.

107 Million Less

In this year's plans the BVK projected the production valued at 11.8 billion forints. About two-thirds of this is PVC and plastics production, chemical fertilizers account for about 2 billion, and increasing amounts of various chemical industrial materials (intermediate products) are being planned. Part of their production is exported--last year, for example, valued at \$56 million and this year they intended products valued at \$46 million for the capitalist markets. (It is not strictly a part of the topic but such a decrease of export calls for an explanation: instead of the earlier export at depressed prices, in the interest of the national economy, increased quantities of important finished plastics products are made in this country from the PVC powder, mostly to replace imports, and this improves the country's foreign currency balance.) The enterprise anticipates profit of 1.5 billion forints in 1985.

"How much of this did the winter take away?"--I asked Gabor Fekete, the BVK's vice president in charge of economic relations.

[Answer] Fortunately we did not suffer serious damage like equipment damage due to freezing, and even though minor problems did occur, no major problems were caused by the freezing weather. Rather, losses of production caused problems. Due to energy limitations income from sales decreased by 107 million forints. Out of this the value of unrealized capitalist export is 62 million forints and the decrease in the enterprise's profit is 60 million.

[Question] Which product manufacture suffered?"

[Answer] Mostly the production of ammonia, needed for making nitrogen fertilizers, decreased due to the lack of natural gas. Consequently less ammonia is exported on the one hand, and on the other hand less calcium ammonium nitrate (MAS) has been produced for the agriculture. Furthermore, we can produce less urea fertilizer which primarily means a loss of export. A significant quantity of caprolactam we make for the Hungarian Viscosa Factory for thread production was also lost, and last but not least we can also furnish less phosgene to the Northern Hungarian Chemical Works for their pesticides.

"The most important and largest profile, PVC production fared the best. There are no problems with producing the 172,000 tons of powdered PVC, 38,500 tons of which is for capitalist export and about 20,000 tons for socialist export."

"It really is true"--says Istvan Kalo, head of the PVC factory--"But this does not mean that we did not feel the winter. Even though the outdoor facilities suffered only minor frost damage, nevertheless we were shut down 5 times during the winter due to power failure and as a consequence of this our specific steam and water utilization indices suffered which caused an extra 7 million forints in operating costs. Fortunately we can economize better in the factory and thus for the rest of the year we can hopefully make up this cost increase. In the pledges of the brigades, for example, it is a very important element that they do everything to improve the specific indices. We can also make some profit on the major repairs of the PVC factory in May. It is estimated to take 3 weeks but we would like to make it in less time. And finally we have hopes of making up for the winter's increased costs."

Protecting the Old Plant

Just as self-assured are the statements of Sandor Fernye, distillation operator of the MAS plant, even though the winter created a more difficult situation in the production of chemical fertilizers.

The plant is not on the "show path," they dislike showing it to visitors. There is not even a road to it, we are slipping around on mud and clay, trying to avoid the puddles as we go there. Then we take the elevator to the top level where we are greeted by valves and instruments of undecipherable purpose and by sharp ammonia odor.

"It is good for the sinuses"--Sandor Fernye encourages--"but then we cannot change this here anyway. But we ought to make changes on the plant, it is old and obsolete today. It has been operating for 33 years and is considered an old man in the chemical industry. But we are still producing first class chemical fertilizers. If we did not have gas limitations and were able to get enough ammonia, we would not have fallen behind. But we will make it up if everything goes well and we get enough raw materials. Originally we planned to make 570 tons a day, now we are trying to produce 620 tons a day. While the plant was shut down, we made the repairs. There was no major damage, but we had some minor frost damage. This is no surprise, I have been working here since 1962 and we have never had a winter as harsh as this. We also pledged a Communist shift, and during it we put the plant in shape, so that now we can produce without interruptions."

The explanation would satisfy me, but it still makes one think. If now when we are in trouble we can produce that much more, isn't the plan a little lax? Could the reserves we have found now also be used at other times?

"This extra production is a very big risk in chemical fertilizer production"--Sandor Fernye explains--"since everything must gel together for this. In an old factory like this, if we produce much for a week, problems can easily occur after that. For example, if a pipe bursts, it means a day is lost. In order to minimize the chance of breakdowns the equipment must be handled very carefully. And even besides this, we did the necessary repairs on Communist Saturdays. Even so it is not certain whether we can really make up for the losses, but if we have no faith in success it isn't even worth to try for it."

We are talking with Endre Derenko, group leader of the caprolactam plant, in the plant's control room. The instruments which show every phase of production, are indicating no problems at all now.

More Professionally, With Better Discipline

"The plant was shut down for 4 days during the winter"--the group leader says--"and for almost 3 weeks it operated at 50-80-percent capacity. This caused a loss of about 10 million. This is also a continuous operation where--because of this--the losses can be made up with additional work. For example, the time of the major repairs ["turnaround"] can be made shorter by Communist Saturdays, which makes up for 2 or 3 days of the 10 days we lost. We have also come up with an invention for making one of our important export items, and this also brings in a profit. The daily work also makes a lot of difference. For example, as there are 57 of us in the plant instead of 67, on each shift we are short of 3 or 4 people. Several of the workers can perform four or five different jobs now, so that they can substitute for each other. More professional, more attentive work can still make up a lot by the end of the year."

"They are working better, with more discipline now in the plants, as they can feel the problems of lost production"--says Gabor Fekete --"Even our original plan was not an easy one, but still there are reserves in every plan which help counteract the unexpected difficulties. But we are counting on getting more and better work from the employees. With minor measures, eliminations of bottlenecks and with modernizations we would like to increase the current 196,000-ton capacity of the ammonia plant to 200,000 tons. Besides this we are also counting on the enterprise economic work associations [VGMKs] whose work can also contribute to the extra production. There is a price, of course, for all of this--these tasks can be handled at a cost of about 25 million forints."

"In the final analysis, how much of the losses can you make up?"

"The enterprise's profit depends to a very large extent on how the presently very low PVC prices will develop on the world market. Considering today's conditions we will be able to make up 61 million of the 107 million loss of sales, 41 million of the 62 million loss of convertible exports, and 34 million forints of the 60 million loss of profits," Gabor Fekete noted.

HUNGARY

PROBLEMS, CONDITION OF TRANSPORTATION SYSTEM EXAMINED

Budapest NEPSZAVA in Hungarian 30 Mar 85 p 6

[Interview with Dr Laszlo Toth, state secretary in the Ministry of Transportation, by Andras Bencsik: "Transportation Cannot Break Down"]

[Text] The older generation, even those of middle age, can remember the times when a resident of Pest could be characterized by, among other things, quarelling, jostling and crowding on the streetcar. The period of "move to the center of the car" essentially ended in the 1960's with the general renovation and modernization of the mass transit vehicles. Mass transit in the capital today is comfortable and can be called good even measured by European standards. Long-distance transportation in the country has improved similarly in recent decades. But the indisputable development, which peaked in the 1970's, seems to have halted now. The slowing of it in more and more sectors of the transportation branch is being accompanied by phenomena which are not too gratifying. Where is transportation going? We talked about this with Dr Laszlo Toth, state secretary in the Ministry of Transportation.

[Answer] In the Sixth 5-Year Plan, as is well known, the chief task, in addition to preserving the standard of living, was consolidating the economic balance, and it followed from this that, after the earlier favorable period, the development of the transportation branch was definitely forced into the background. Prior to 1980 the ministry was getting 12 percent of the investments of the national economy. It got only 11.7 percent in the Sixth 5-Year Plan and it will probably get even less in the Seventh 5-Year Plan. This is a decrease of about 2 billion forints per year. And there really are unfortunate consequences of having less money. The age composition of the vehicles of the national economy has deteriorated. In virtually every vehicle category the average age has reached the just tolerable level. In the past 5 years we have been able to get 120 units to replace or supplement rail passenger cars. The scrapping was substantially greater than this, and although passenger traffic has decreased as a result of the price increases it has not done so to the extent that the cars have been used up or aged. In the case of the Volan autobuses the stock written off to zero was 21 percent 5 years ago. This year

the figure exceeded 40 percent. A 50-percent zero value stock can be regarded as absolutely critical from the viewpoint of operational security.

The situation is better in the capital. Transportation is maintaining its level here today; indeed, with the reconstruction of the streetcars and construction of the metro, for example, it has even improved. The same cannot be said of the large provincial cities. We have cities where the vehicle park for mass transit consists of buses and streetcars, 60-70 percent of which are with zero value.

[Question] What is the way out of this tight situation?

[Answer] Vehicle reconstruction should be accelerated in the Seventh 5-Year Plan. For the time being the financial conditions for this do not appear to be available. In any case we would like to see that the conditions of the vehicles do not deteriorate substantially on a national scale. And, of course, this would require that the councils participate more intensively than before in assuming the costs at their enterprises.

How contradictory this state of affairs is can be illustrated with the renovation of rail vehicles. Operating the rail cars which are older than 25-30 years for another 5 years will require as much money as if we were to completely replace this stock, and then we could even save 2-3 billion. We cannot pay out the necessary money in one lump now, but the condition of the rail and highway networks is causing us a problem greater than that caused by the vehicle park.

[Question] The condition of our highways really leaves much to be desired. The major highways should be expanded at a faster pace, but building a beltway around the capital and renovating the deteriorating side roads and bridges would be just as important.

[Answer] Five years ago--after 10 years of scheduled modernization and maintenance--we had a very good network of main roads. Since then the sums which could be turned to investment decreased, but the money which could be turned to maintenance also decreased. The network of main roads began to deteriorate, and the side roads deteriorated even more. Today, 40 percent of the highways do not meet the needs of today's traffic. The poor condition of the road network causes the national economy a loss of about 3 billion forints per year. It is interesting that the amount money which we can utilize to road maintenance is short by about this amount. Consequently, those involved in transport are forced to pay out on various losses what the national economy seems to be saving on maintenance.

[Question] What condition are our bridges in?

[Answer] More than half the bridges are not suitable in regard to width and load bearing capacity. Forty percent of them were built before the war or restored immediately after the war. Rail and highway traffic share six bridges and a number of bridges can be operated at only half width.

In a unique way the picture is more favorable in the case of the circumferential beltways. Here the provinces are ahead of the capital. A number of our large cities have bypass roads, and for this reason also we are urging that in the Seventh 5-Year Plan the first section of the Budapest beltway, between Route 6 and Expressway M5, be built with World Bank credit. The next step might be construction of a circumferential section between M7-M1 and Route 6. It is time to build more large bridges. Thus it appears now that--as far as the highway network as a whole is concerned--that the length of roads in a condition unsuitable for the traffic will increase further.

[Question] It is not only the roads that are getting old, the passenger automobiles travelling on them are too. And their average utilization is high, as well not to speak of the fact that the ratio of automobiles with two-cycle engines is unpleasantly high. All this is a serious burden from the viewpoint of energy conservation and environmental protection alike. Should we continue repairing the ancient jalopies or somehow try getting new, modern autos?

[Answer] The average age of passenger cars today is over 8 years. It would be necessary to acquire 200,000 new cars per year to finally reduce the general ageing. In contrast to this in recent years 80,000 to 90,000 cars have come in and we cannot expect a great improvement in either quantity or quality in the years ahead. This means that repair capacity must be increased by another 10-15 percent in the next plan period. Since the regulators valid in the socialist sector do not favor the accumulation of the finances necessary for this development, it will have to fall primarily on artisan industry. If artisan industry is able to do this then its share in passenger automobile repair will increase from the present average of 44 percent to nearly 50 percent by 1990.

[Question] But obviously it would be more beneficial to reduce this tension by importing new cars, if only because almost half of the trips here are made by passenger automobiles.

[Answer] It will not be possible to satisfy all the need from the socialist relationship in the near future, so the conditions for modernizing the vehicle park do not exist. What other solution might exist does not fall directly within the domain of the transportation ministry. But we should not forget that the highways are not suitable even for the present vehicle park. The government is keeping these problems on the agenda. Proposals regarding possible solutions are being prepared now, but they will probably bring results only in the longer run.

[Question] There is a problem which recurs at the end of each year. The MAV [Hungarian State Railways] makes gigantic efforts to deliver what must be delivered, but due to the orders slipping over into the second half of the year it frequently can do so only uneconomically and with confusion. Will we finally learn this year from the experiences of last year?

[Answer] Concrete programs to increase early deliveries have been prepared on the basis of the experiences last year. The goal was to increase early deliveries this year by 5 percent over the similar period of last year. We are

encouraging this with a seasonal rate 10 percent cheaper than the average. It appears now that partly because of the long winter and great cold and partly as a result of production which got started more slowly anyway there were 30 percent less goods earmarked for early delivery than at this time last year. There will be severe delivery peaks not only at the end of the year but even in the second quarter, so now we must take special measures to resolve this. This is also a problem because with the ageing of the rail vehicle park the railway is meeting the commodity and passenger traffic needs under exceedingly more difficult circumstances, and in the coming plan period will do so at a level which in some cases will be deteriorating compared to the present level. Adequate developmental resources are not available for a direct improvement of the level of passenger and freight traffic. We must concentrate our resources on a partial reconstruction of obsolete networks and junctions.

[Question] In the final analysis, if the condition of the domestic passenger automobile park is threatened with complete senility, if the mass transit vehicles are ageing disastrously and funds are not being generated anywhere sufficient to replace them with new, if we should be building bridges and enough side roads for the expressways, if the trains and technical equipment are badly in need of modernization, if the metro can be built only at a reduced tempo--in a word, if we study it part by part and it appears that a large part of domestic transportation is struggling with alarming problems--what can an expert, responsible for these things because of his office, count on in this situation?

[Answer] In the first place I must state clearly that despite all our problems the level of transportation represents a value in many respects which should not be underestimated, one which we would like to preserve til the end of the 1980's. Transportation must be developed not because this is a selfish interest of transportation but rather because great economic damage could arise if its development continues to lag behind that of the producing branches. The breakdown of transportation can come about only slowly. In part this is fortunate; in part it is a problem. Because in this way one does not sufficiently feel the threatening power of our problems. The ministry has an obligation to make people feel the problems of transportation more, but we must take cognizance of the economic policy goals. After this it is our task to manage as well as possible with the resources which can be provided to the branch. Recognizing this, we want to turn more to the rail and highway routes in the Seventh 5-Year Plan, accepting a further deterioration of the vehicle park. This means that we must count on a great and concentrated vehicle reconstruction in the 1990's. In addition, we will do everything in the interest of exploiting other possibilities in the course of the plan period, possibilities which cannot be planned realistically now, to slow the process of using up the vehicle park and in places stopping it.

8984

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POLAND

OBJECTIONS TO PROLONGATION OF RATIONING VOICED

Market Should Be Normalized

Warsaw VETO in Polish No 51, 16 Dec 84 p 1

[Article by Marian Mitkus]

[Text] Rationing is acrippler of our market and economy. It has slowed down the progress of economic reform, smothered competition and had a depressing influence on consumers. Rationing cards have brought employment to thousands of persons who cut, stick, count and print them--and this costs money.

Rationing was needed at one time when there was a shortage of articles like detergent, cigarettes, and butter. Then we had to ration items like gasoline and meat. They were needed when the market was in a panic.

The known disturbances to the market that provoked increased purchases were caused by two factors. Due to anxiety and sociopolitical threats, people would buy large amounts of flour, sugar, salt, matches, and candles "just in case". Second, people expected a large increase in prices. At present, these two reasons are out of date. Social and economic stabilization has occurred and large price increases are no longer a threat.

Therefore, it is now time to abandon rationing. But a secondary and unfavorable occurrence has taken place--people have become accustomed to rationing. And this is terrible, the loss of faith that people can live normally. Consumers forget that one of their basic rights is the freedom to buy and to choose. This has deepened the abnormality of the market.

We have freed ourselves from the rationing of a few products. Especially successful has been the program to abandon the rationing of soaps and detergents. We increased our purchases of raw materials needed in soap and detergent production and augmented our imports, so we have an ample supply in the stores. And the entire operation was a success, so no one is hoarding soap and detergents now and speculating with them.

Flour, rice, sugar, and butter--these are products whose rationing should be stopped. The standards are such that families do not feel the inconvenience of their rationing. We have almost forgotten that grits are still rationed. A similar situation can be found with flour. Why have we not stopped the rationing of dry goods?

It is an open secret in our country that we produce very ample amounts of sugar and butter. If we discuss sugar, it is also an open secret that many people store sugar at home because they have the right to it through rationing, even though they do not use that much sugar. The butter in the stores often is old; one can conclude that people also store it at home and do not make use of the rotation, leading to waste.

The fear of disaster still exists, and this is the main reason we keep rationing flour, rice, grits, sugar, and butter. Maybe we have praise our moderation in this matter--the care taken that nothing will go wrong on the market, leading to renewed shortages, breakdown of the sales continuity and speculation.

On the other hand, keeping rationing has to be called burying one's head in the sand. Sooner or later we shall have to eliminate rationing. We cannot drag this matter on indefinitely; we are going to have to make a decision sometime. Abnormality and keeping insurance--rationing is in essence insurance--cannot be retained for years.

As of late, the following danger has shown up for a normal market. Some producers have proposed that rationing be kept and the surpluses of rationing exported. The argument is that we shall obtain hard currency to repair the economy in other areas. We discussed butter. The goal is respectable, but...

I feel that we have to stop these ideas. A better approach would be the one used with detergent. I cite the fact that we spent hard currency to ensure the elimination of rationing of soap and detergent. But in removing the rationing of other goods, we have to use the surpluses and not ensure them with imports.

The editors of VETO have been fighting for 2½ years to remove rationing from the economy. We are constantly dealing with this issue. We have to think about this situation rationally, without shouting. We agree that this is not easy. But consumers have the right to a normal market.

We were very pleased with the news that the unions have come out with an opinion on rationing. In documents issued after the First Nationwide Trade Union Agreement Meeting we read: "We demand that in the near future the rationing of food products be banned, except for meat and meat products."

Sugar Rationing Unnecessary

Warsaw ZYCIE WARSZAWY in Polish 16-17 Feb 85 pp 1, 2

[Interview with Antoni Kuzba, director of the Association of Sugar-Producing Enterprises, by Leszek Bedkowski]

[Text] [Question] Do you remember the circumstances surrounding the introduction of sugar rationing? It will soon be 9 years ago.

[Answer] Yes, this was in the middle of 1976. We prepared for increased prices of many food products, among them sugar from 11.5 zlotys to 26 zlotys per kilo. People rushed to the stores and bought sugar in enormous quantities. Then we introduced rationing. And this was the only way, the prices did not go up,

but soon we discovered that if we held on for 2-3 weeks, then the market would become normal and any rationing would not be necessary.

[Question] But we have continued rationing up to this day. Why so long? Is there a constant shortage of sugar?

[Answer] No. There was a shortage only in 1979 and 1980. The present domestic market needs 1,650,000 tons of sugar per year for stores, processing, beekeepers and those who produce sugar beets. And production has been as follows: in 1981, 1,740,000 tons; in 1982, 1,850,000 tons. After that, we had a record: 1,950,000 tons (in raw sugar even 2.1 million tons) and in 1984, we had 1,467,000 tons of sugar. We rebuilt our reserves long ago and have even exported sugar.

[Question] What is keeping the rationing alive?

[Answer] First of all, the lack of market stability, but let's say that here there exists a connection--all rationing has an influence on instability. For example, sugar rationing evokes compulsory consumption. Here we have a level of 41-42 kilograms of sugar per person per year, but the average in the other European countries is 36-38 kilograms. When Czechoslovakia introduced sugar rationing for a short time, the use of sugar went to 44 kilograms. When the rationing was withdrawn, consumption there returned to 37 kilograms.

But the 1970's had other circumstances, too. For example, we exported sugar to obtain hard currency without looking at world price levels for sugar. In our own country, we had problems with sugar beets. This kept prices low and the farmers restricted production. The sugar inspectors went from farmer to farmer crying conspiracy and then demanded that they plant sugar beets.

The situation also became complicated in the sugar factories. A new high-reproducing sugar beet appeared. They pushed production because the main problem was with the fodder and those new beets provided more fodder. But there was also less sugar. The sugar factories had to process about 30 percent more sugar beets to have the same level of sugar. The sugar factories in Poland were running out of breath.

[Question] It was at this time that you began to prolong the sugar beet campaign for too long.

[Answer] The processing industry was forced to do this. During the last 40 years of planting sugar beets, the territory has increased about 3.2 times and the harvest about 5 times, but the input of factory production has increased only 1.5 times. Sugar production has increased 2.4 times and consumption about 3.7 times. Sugar production has increased 2.4 times and consumption about 3.7 times, but the sugar value in the beets has been lowered by about 27 percent. This is the picture of contradiction. As an effect of the current price of sugar, the sugar processing industry has an annual loss of 6 billion zlotys.

[Question] This sounds very dramatic and maybe we should follow a suggestion by reader of ZYCIE WARSZAWY. As noted, since the cost of 1 kilogram of sugar on the international market is 7 cents and the official Polish price is 9.66 zlotys, why not import sugar?

[Answer] First, where do we get the hard currency? Second, readings of international commodity exchanges can be faulty. For example, we are selling white sugar to the United States and receiving \$140-\$170 per ton. This is not forced export. We are working under conditions of the reform and we are obtaining even small amounts of hard currency. We need it to buy chemical products, machinery, and so on. Moreover, we have received oil from China for the sugar.

But the most important fact remains that we have sugar, even beyond the needs of the domestic market. Why should we buy it then? We process constantly approximately 14 million tons of sugar beets and receive approximately 1.8 million tons of sugar per year. This will be enough for a few years, even if every year there are 350-360,000 more Poles.

[Question] And will there always be losses?

[Answer] Exactly, we have to talk about this. At this time, the sugar-processing industry has subsidies from the state, which is why the industry has money for development. We need 6,000 zlotys per ton to make a profit. You will ask if this is a lot? The margin of profit for wholesale and retail is 12,000 zlotys per ton. Therefore, as a producer, we are not very demanding. Before the Second World War, 1 kilogram of sugar cost 1 zloty; 46 groszy was for duty. The profit was 11.5 zlotys, exactly 20 percent of the production cost.

[Question] How large is your profit now? Perhaps we should call it relative, since the production is subsidized.

[Answer] The minister of prices fixed the price at 5,000 zlotys per ton. However, the finance minister placed a tax on the profit of 60 percent. In reality, we have a little more than 2,000 zlotys profit for 1 ton.

The effect is that for the current modernization, we should pay 9-9.5 billion zlotys per year, but in fact we are paying 5-6 billion zlotys. We are now in the 3rd year of the reform, but we don't have a stable financial system in the agriculture-farm industry. The level of subsidy is limited; this is understandable. We have to fight for the relaxation of taxes, credits, exemptions, etc. The stability of the system must come first. Secondly, new sugar plants. I feel that four will be enough--in the provinces of Zamosc, Lublin, Gorzow and Opole.

[Question] I understand that if the subsidies are limited, then the money for development will come from higher sugar prices. But don't you think that this is a deceptive hope? The new price will allow for the elimination of the subsidies, which will help the government, but it won't do anything for the sugar plants. Let us say that the customer's pockets will be exchanged for the state's pockets.

[Answer] First, elimination of the subsidies will be the first step to stabilize the financial system in our industry. Second, we would benefit if the price of sugar were responsibly high.

[Question] One moment. Before you tell us what price would be suitable for your industry, let's think about limiting production costs.

[Answer] Here it is. The answer is very short. In the cost of sugar production, 84 percent is the price of sugar beets together with the cost of the contract for supply and procurement. The field of maneuver is not very large. We can increase output, but as an industry we reach our limits--we spoke about the artificially prolonged sugar campaign.

We make efforts to limit the so-called "departmental costs" and the entire institutional ones, lowering employment in administration. The union office employs 53 persons and at one time one central management level--materials--employed 257 persons!

They are looking for a reserve fund in salaries. But salaries and taxes in production cost come to only 1.9 percent. In a word, the price of sugar is set above all by the price of beets (I have left out the margin of profit, as it is not my place to judge this).

[Question] In your view, how much should sugar cost?

[Answer] We have to fix the price with a margin of profit--72 zlotys per kilogram. This price would have to satisfy the industry, but it would last only a short time. The last statement by the Bialystok representatives in the Sejm showed that the price of sugar beets will rise and then the main factors of the production costs of sugar will change. As sugar workers, we cannot oppose price rises for sugar beets, because if the farmers recognize that sugar beets are unprofitable we shall be without stock.

Of course, diminishing sugar production would not become an immediate threat to the domestic market, because we would have diminished exports. But at the same time, the domestic market could be in danger.

[Question] In other words?

[Answer] In other words, the best price of sugar would be 90 zlotys per kilogram of sugar. I would call this a future-oriented price. At present, a little is needed for growth, but there is a chance for rapid development of sugar beets and the sugar industry.

[Interviewer] I am terrified of this price, even though I vote for the removal of rationing. I know that rationing will not protect us from increasing prices. In 1976, we withdrew from increased prices, but later the price of sugar increased many times over.

9807

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ROMANIA

COOPERATION BETWEEN SMALL INDUSTRY, NATIONAL INDUSTRY

Bucharest REVISTA ECONOMICA in Romanian No 2, 11 Jan 85 pp 7-8

[Article by S. Cruceru, M. Daniel, and E. Nitulescu]

[Text] The activity of small industry units has proven to be particularly profitable in practice, insofar as these units efficiently utilize local material, and human resources, and for the same results, require lower investments than large or medium-sized units. The involvement of small industry units in activities which the national industry performs with lower efficiency, leads to the organization of cooperative production actions aimed at modernizing and improving the technical level and quality of products, full utilization of existing facilities, higher labor productivity, and lower consumption of raw and other materials, fuels, and energy.

During 1982 and 1983, 9.4 percent and 10.2 percent, respectively, of the value of industrial goods was produced by UCECOM (Central Union of Artisan Cooperatives) units, while 3.8 percent and 3.5 percent was produced within CENTROCOOP (Central Union of Consumer Cooperatives). More than 370 cooperatives in 39 counties participated in UCECOM, with 85 percent of the cooperation occurring among units of the small industry and national industry in the same county.

Assuring Stability for Long Term Contracts

Expanded production cooperation for parts, components, subassemblies, and for spare parts repair and rebuilding, particularly on the basis of long term contracts, is particularly advantageous, since the small industry could thus achieve optimum work loads for its production facilities; fully utilize its available manpower; obtain the necessary raw and other materials, as well as technical documentation from cooperating partners; increase the remuneration of its workers; increase its volume of industrial goods production; obtain a definite volume of orders; and obtain tooling through transfers.

Due to their greater adaptability, small industry units could thus also promptly respond to meet the needs of national industry customers, by efficiently producing good quality components, especially in the case of small

runs or custom products which require a large amount of manpower. At the same time, in order to assure a mutually advantageous cooperation, national industry enterprises have the obligation to support small industry units to modernize their production capabilities, introduce advanced technologies, provide technical assistance in manufacturing parts, subassemblies, and components, and so on.

The increased production achieved during this--and especially the next--five-year plan, through cooperation between small industry and national industry units, requires a more intense collaboration, particularly on the basis of long term contracts. Collaboration between the small industry and the national industry on the basis of an appropriate exchange of information, such as indicated by practical experience, does not always occur through the various stages of formulating and basing the plan's tasks. At the same time, while units which carry out small industry activities have been assigned responsibilities for expanded cooperation with the national industry, the production plan does not clearly specify tasks for cooperation, either for small industry units or for units of the national industry. Together with this, while the territorial coordination of small industry activities, independently of their jurisdiction (UCECOM, CENTROCOOP, UNCAP), is assigned to people's councils, the legal framework does not separate sufficiently well in territorial plans, the functions of these councils from those of national cooperation organs.

Analyses of some small industry as well as national industry units have shown that extremely important factors in the cooperation between these units are both the prices stipulated in cooperation contracts, and the supply of raw and other materials to the small industry. In some situations, due to generally lower administration overheads and lower technical endowments, the prices proposed by small industry units were lower than those proposed by national industry units, as well as those achieved under integration conditions; a rather large proportion of the contracts are based on prices established by agreement between the two parties.

At the same time, the supply of the small industry with raw and other materials is a factor which determines an efficient collaboration between small industry and national industry units. A number of difficulties which must be rapidly eliminated persist in this area as well: the distribution of raw and other materials does not fully meet the materials demand for processing local resources; limited possibility and interest for small industry units to obtain and use part of the reusable raw and other materials recovered from national industry processes, which are not used by that industry; and so on.

The existing legal framework (Decree No 72/1978) stipulates only for UCECOM units, the obligation of national enterprises to allocate from distributions, stocks, or other available resources, the raw and other materials needed by the small industry. This obligation is not being fully respected by national units, which usually require that small industry units complete their contracts by obtaining their own necessary raw and other materials. Under

these conditions, the small industry units request raw and other materials from centralized funds, in some cases tending to increase the actually needed amounts, both because distributions do not fully satisfy their needs, and in order to assure the completion of cooperations when national enterprises do not supply the necessary materials.

Greater Proficiency in Relations with National Industry

The existing reserves in the cooperation between the national industry and the small industry must be exploited as rapidly as possible in order to improve economic activities and increase the efficiency of each activity sector. According to the orientations in the Directives of the 13th Congress of the RCP, several priorities exist for the next period regarding improved coordination between the territorial, branch, and subsystem activities of the small industry:

1. Perfect the plan formulation, foundation, and approval mechanism by:

Stipulating in annual production plans, both for national industry and small industry units, concrete cooperation tasks, so as to establish sufficiently early grounds for proper fabrication of parts and subassemblies required by the national industry, and greater concern for expanding cooperation relations in production, consistent with the tasks stipulated in this respect by the Uniform Plan for Industrial Cooperation Among Enterprises, Centrals, Ministries, and Counties;

Achieving close collaboration between national industry and small industry units in formulating and founding the plan, on the basis of a suitable flow of information in both directions, regarding: capabilities of the small industry to fabricate various parts, units, and subassemblies; costs for this fabrication; components required by the national industry which could be the object of cooperation with small industry units, and manufacturing parameters for these parts; stocks of raw and other materials, including reusable ones; available tooling in national industry units; and so on.

In this respect, it appears necessary to further increase the role of county peoples' councils, as territorial plan assignees, by forming within these councils a specialized department with its own administration, whose functions would be to coordinate small industry activities at a territorial level. This form of organization would allow efficient management and guidance of small industry activities, improved and consistent collaboration with the national industry, and more effective awareness of all material and human resources in a county's territory for better utilization;

On the basis of protocols, perfecting during the year preceding the plan, framework cooperation contracts which would become instruments for basing plan tasks involving collaboration between national industry and small industry units.

2. Assure the quantitative and qualitative supply of raw and other materials in order to increase the flexibility of small industry units and support proper cooperation between them and national industry units. From this standpoint, it is useful to establish decisively for organs which assure the coordination of the small industry at a national level (CSP--State Planning Committee, CPCP--Committee for Peoples' Councils Problems, MATMCGFF--Ministry of Technical-Material Supply and Control of the Management of Fixed Assets) a differential inventory of raw materials considered as local resources, as a function of specific conditions in each county, zone, and locality, and to correlate along the vertical line of small industry subsystems and of the enterprise-central-ministry path, the plan tasks for small industry units regarding the exploitation and distribution of local resources, whose processing requires the use of raw and other materials coordinated through balances.

3. Strengthening the role and responsibility of national industry units in assuring better collaboration with small industry units by: providing in the formulation and foundation of the enterprise-central-ministry technical-material supply plan, specific positions for raw and other materials, including recoverable ones, necessary for cooperation with small industry units. In this respect, it is necessary to assign greater latitude to industrial centrals in defining recoverable and reusable materials whose exploitation is more efficient through cooperation with small industry units; provide technical documentation and manufacturing technologies to the small industry; provide specialized technical assistance for fabrication preparations; organize qualification courses to improve the professional training of small industry personnel.

4. Improve the existing legal framework so as to eliminate inconsistencies, and assure the mobility, flexibility, and adaptability needed for properly carrying out activities in small industry units, and for collaboration with the national industry. From this standpoint, we believe it necessary that the measures undertaken be aimed primarily at defining the area of manpower recruitment; simplifying transfer procedures for machine-tools, tooling, and installations between national industry units and small industry units; expressly stipulate in framework contracts, the obligation of national industry units to supply raw and other materials for manufacturing components through cooperation, and to generalize these procedures in all small industry subsystems.

11,023

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ROMANIA

REDUCTION OF PRODUCTION COSTS IN CHEMICAL INDUSTRY

Bucharest REVISTA ECONOMICA in Romanian No 2, 11 Jan 85 pp 5, 6, 19

[Article by Constantin Ciumbulea, director in the Ministry of the Chemical Industry]

[Text] The continued strong reduction of production costs in all branches of the national economy, through substantial reduction in material costs per unit product, and in general, of all manufacturing costs, as well as the consequent higher profitability and efficiency, represent tasks of maximum significance stipulated in the documents of the 13th Party Congress. In the light of these requirements, Chemical Industry enterprises have made and continue to make substantial efforts to reduce all costs per unit product, so as to strongly reduce production costs.

Considering that a mere 1 percent cost reduction represents more than 2 billion lei of additional profits for the chemical industry in 1985, the intensified pursuit of production cost reduction in each and every unit, while retaining high product quality, must be a priority concern.

Following the actions taken to reduce production costs, significant results were obtained in the Chemical Industry during the first four years of the current five-year plan (see table). In 1984 for instance, total production costs were 5.7 percent lower than in 1980. The best results were obtained in rubber and plastics processing (9.5 percent), in chemical fertilizers (7.8 percent), in the production of spare parts for the Chemical Industry (8 percent), in pharmaceuticals, cosmetics, dyes, and lacquers (7 percent), and in crude oil processing and the petrochemical industry (6.2 percent).

Cost reduction per 1000 lei of produced goods (1980 = 100 percent)

| | 1983 Effective results | 1984 Preliminary results |
|--------------------------------------|---------------------------|-----------------------------|
| Total costs in the chemical industry | 96.9 | 94.3 |
| Material costs | 97.7 | 95.3 |
| Labor costs | 89.1 | 84.2 |

These favorable results in production cost reduction during 1984, and during the first four years of the five-year plan in general, were determined by some actions aimed primarily at:

1. Continued reduction of raw materials, material, fuel, and energy consumptions, as well as reduced materials and raw materials costs by replacing importations with products fabricated in Romania at lower prices.

Compared to 1980 for instance, significant savings were obtained during 1984 due to updated and improved manufacturing technologies, through reduced specific consumptions per product, savings which given the production levels achieved last year, represent large amounts of raw materials that were thus made available: 1375 t of vinyl chloride in the fabrication of polyvinyl chloride; 2772 t of ethylene in the fabrication of vinyl chloride; 5200 t of natural rubber in tire manufacturing; 11,500 t of sulfur in manufacturing sulfuric acid; and so on.

Because of measures taken by units to save fuels and energy and recover reusable resources, the chemical industry has obtained remarkable results in this area. During the 1980-1984 period, large reductions in the consumption of fuels and energy were obtained in manufacturing acrylonitrile at the Pitesti Petrochemical Combine (20 percent for fuels and 13 percent for energy), sodium bichromate at the Tirnaveni Chemical Combine (32 percent and 10 percent, respectively), butadiene at the Borzesti Petrochemical Combine (23 percent and 58 percent), caprolactame from benzene (10 percent and 11 percent) and melane fibers at the Savinesti Synthetic Fiber Combine (14 percent and 16 percent), polyester fibers at the Iasi Synthetic Fiber Combine (12 percent and 3 percent), complex fertilizers with nitrogen, phosphorus, and potassium (15 percent and 9 percent), organic dyes and pigments (12 percent and 9 percent), and so on.

In reducing material consumptions, major contributions were made by researchers and designers in the chemical industry, who together with collectives in enterprises have constantly directed production activities toward new products and modern, highly efficient technologies which make better use of raw materials and energy, so as to obtain products of quality and high value with low consumptions and costs, eliminate importations, increase the utilization of reusable materials, and so on. Consequently, as a result of completing the objectives of the Plan for Introducing Technical Progress in 1984, we estimate that while obtaining a substantial production growth by introducing a large number of new and modernized products, and of new and improved technologies, fuel consumption will be reduced by approximately 90,000 tons of conventional fuel, and energy consumption by about 17,000 MWh, thus substantially reducing production costs and obtaining a profit increase evaluated at over 800 million lei for last year. At the same time, on the basis of 11-month results, it is estimated that more than 2600 new products and varieties will be produced in 1984, to replace similar imported products with an value equivalent to hundreds of million dollars.

2. Reduced manpower costs per unit product, primarily due to higher productivity and higher labor productivity, through maximum utilization of existing facilities, as well as the placement in operation of new, high productivity objectives. Considerable reductions in manpower costs were obtained especially in petrochemistry, chemical fertilizers, rubber and plastic products, chemical fibers and filaments, and so on.

3. Relative reduction of amortization and repair costs of all kinds. Shorter repair times, high quality repairs, the use of internal resources for repairs, and a higher proportion of rebuilt parts, are significant avenues for reducing this type of costs; they are adopted by all units of the chemical industry, and particularly by those at the Industrial Central for Chemical Fertilizers, the Rm. Vilcea Industrial Central for Inorganic Products, and the Industrial Central for Non-Ferrous and Rare Metals, sectors in which the proportion of this category of costs in total manufacturing costs is high.

4. Another direction for reducing production costs is a complete rationalization of administrative and management costs, which constitute a small proportion of the costs of chemical products, but are nevertheless a source of savings.

Although good results have been obtained in all units, some shortcomings with respect to annual plan tasks in various centrals and enterprises must be reported. Failure to reach planned expense levels have been noted in 1984 at units of the Craiova Industrial Central for Chemical Fertilizers, the Savinesti Industrial Central for Chemical Fibers and Filaments, and the Bucharest Industrial Central for Non-Ferrous and Rare Metals. Gaps between forecasts and achievements in these units were due primarily to a failure to achieve design parameters in a number of new installations placed in operation in previous years, failure to provide raw materials in the quantity, and sometime quality, appropriate for the requirements of technical processes, discontinuous operation of installations resulting from interruptions generated either by improper maintenance and operation, or by the lack of spare parts, failure to man all stations with appropriate personnel, lack of technical discipline, and so on.

The last year of the five-year plan, 1985, faces the units of the chemical industry with highly demanding tasks in reducing production costs. As the production volume will grow by about 18 percent with respect to 1984, the total costs per 1000 lei of produced goods is expected to drop by 70 lei compared to the preliminary achievements of 1984.

The completion of this task demands considerable efforts on the part of collectives in the chemical industry enterprises to meet the planned level of production costs and recover the shortcomings of some units in 1984. Exceptional measures with maximum economic efficiency are envisaged in order to obtain good results in reducing production costs in units of the chemical industry during 1985 and the entire five-year plan. Starting in 1984, concrete programs of measures with specific terms and responsibilities were formulated to reduce costs. The measures taken by units were based on

critical analyses of achievements obtained in 1984, and aimed primarily at decisive factors in determining production costs: reduced consumption standards for raw materials, materials, fuels, and energy, higher levels of raw material utilization, utilization of recoverable and reusable materials, reduced manufacturing costs through greater utilization of production facilities, reduced manpower costs per unit product, and so on. Keeping in mind however, that the measures established so far do not assure that all units will fully meet the cost levels planned for 1985, and fulfill the task of reducing costs with respect to 1984, it is necessary to continue to more decisively and systematically identify new solutions and measures which will make it possible to achieve planned costs, drawing into this action the best specialists in departments and shops, workers, engineers, and economists.

All of the above indicate that partial, conventional measures are not sufficient to reduce production costs in 1985. In enterprises, essential changes must be made in the entire action of production cost reduction, primarily by continuing to modernize the structure of products, so as to allow the fabrication of products with peak performances, obtained with technical and technologic approaches which will require minimum costs. In 1985 and for the next five-year plan, the essential criterion of chemical development will be the restructuring of production by emphasizing the growth rate of highly technical products and groups of products which can be fabricated with low energy consumptions, which will make maximum use of raw materials, and which incorporate the largest possible amount of highly qualified labor. Priority development will be found in products of fine chemical synthesis and low tonnage products, new chemical and biochemical processes will be formulated, research will be expanded to increase the degree of crude oil processing and methane chemification in order to obtain new polymers and petrochemical products.

Particular attention in this respect will be devoted to:

Modernize existing products and improve technologies, especially for products in which the proportion of raw material, material, and energy costs are very high;

Diversify production to obtain new products with high technical and quality parameters and lowest possible consumptions;

Make maximum use of production facilities, taking into consideration that some installations are still not working at their full capabilities, thus weighing down production costs;

Increase the degree of utilization of raw materials, especially of crude oil, taking into consideration that in some units, material costs are currently high and profitability is low;

Increase the efforts and collaboration of designers and users so as to encourage investments which allow the manufacturing of products with high technical and operational parameters, with a high degree of productivity and low material consumptions.

At the same time, together with the efforts to modernize older technical installations and continue to improve technical processes, it is important to point out that firm action must be taken in units which have to recover lags in achieving design parameters in some installations.

Greater efforts in all enterprises to implement these measures and actions is a requirement of maximum significance for each workers' collective, keeping in mind that strong cost reduction in 1985 will increase the contribution of the chemical industry to a greater production volume with greater efficiency, and to a higher national income.

11,023

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ROMANIA

DEPUTY MINISTER DISCUSSES MEASURES TO INCREASE COAL PRODUCTION

Bucharest SCINTEIA in Romanian 23 Mar 85 p 3

[Interview with Eng Dan Otto Surulescu, deputy minister of mines, by Ion Lazar;
date and place not given]

[Text] Good performance of the highly complex and challenging tasks of the current stage of intensive development of the national economy and exemplary fulfillment of the 1985 plan in all indicators call for procurement and prudent management of energy resources. To that end, as we know, the Session of the Political Executive Committee of the RCP Central Committee of 9 March examined and approved, in accordance with Party Secretary General Nicolae Ceausescu's directions, a number of special programs designed to provide the energy resources needed to implement the 1985 plan provisions. The Program To Obtain the Planned Coal Output for 1985 is particularly important in this respect. We asked Eng Dan Otto Surulescu, deputy minister of mines, to answer some questions about the provisions of this program and the efforts the mining units are making to implement them.

[Question] What measures will the Ministry of Mines take, on the basis of the program approved by the Executive Political Committee of the RCP Central Committee, in order to increase coal production?

[Answer] Upon Nicolae Ceausescu's so inspiring appeal to make every effort to increase coal production, the miners collectives throughout the country are making a sustained effort under the guidance of the party organs and organizations to use the equipment in their inventories with higher indices. In the last 20 years 2.3 million tons of coal have been extracted in March. The average daily output of coal produced is 12,770 tons (12.8 percent) above the February average but it has not yet reached the plan provisions. Major gains in coal extraction were made in the Rovinari and Motru mining combines in the Gorj coal region, which produces about 80 percent of the national lignite output. The average daily output of the Rovinari Mining Combine went up to about 30,000 tons, and that of the Motru Mining Combine reached 35,000 tons. Moreover the Valea Jiului Mining Combine is producing at the plan level. I would note the results obtained by the collectives of the Floiesti Mining Combine and the Voivozi, Salaj, Comanesti, Horezu and Mehedinti mining enterprises, which have produced large above-plan quantities of coal from the start of the year to the present time despite winter conditions.

The best performance of the important tasks in the Program To Obtain the Planned Coal Output for 1985 is the main concern of the workers in the coal-extraction industry. The program examined and approved by the Political Executive Committee of the RCP Central Committee includes a series of actions and measures to secure complete fulfillment of the coal-production plan for this year. In the light of the results in January and February, the program reschedules the production levels in order to recover the arrears logged in the first part of the year, lower the December plan, and increase the output in the other months of the year accordingly. The increases specified for the second and third quarters entail better conditions for extraction from pits, which are expected to produce 40 million tons of lignite in 1985, or 72.7 percent of the total output of lignite and brown coal. For that purpose the program raises the daily coal output to 170,000-194,000 tons in the second quarter and to 210,000-222,000 tons in the third quarter.

Of course specific measures have been adopted to increase the intensive and extensive use of the production lines to at least 65 percent for the whole year in order to reach those production levels, and that requires a higher index in the summer months. Moreover the measures being taken are to raise the hourly productivity of the rotor excavators by about 32 percent.

[Question] The value of the fixed assets of the extractive industry comes to tens of billions of lei, and each unit has some of the most modern and highly productive equipment. What action is being taken to best exploit this important technical inventory?

[Answer] Special emphasis is placed on observance of the schedules for maintenance and repair of the machinery and equipment in the inventories. For that purpose, the big lignite pits in the Oltenia coal regions are making an intensive effort with special equipment to perform inspection and repair operations on the technological equipment (rotor excavators, dumping machines, main-line conveyors) so that all production lines for excavation, transportation and dumping will be restored to operation at full capacity in the shortest time. We are receiving major support in this period from some units of the Ministry of the Machine Building Industry, the Ministry of the Chemical Industry, and the Ministry of National Defense, who are contributing manpower and specialized workers. Similar actions are being taken in other units too.

One of the measures taken to lengthen the available working time of the rotor excavators and other equipment in the production lines is to shorten the time of repairs by procuring the subassemblies in advance so that they can be installed promptly and the equipment will be immobilized for the shortest possible periods. Defective or worn subassemblies are to be repaired in the mining units' repair shops.

[Question] Increased electric power production also depends upon the quality of the coal delivered to the thermoelectric power plants. What action is being taken to improve the quality of the coal?

[Answer] As the party documents point out, the problem of the quality of the coal delivered to the electric power plants is an essential consideration in the activity of the mining units. For this purpose the mining combines and enterprises have instituted specific programs to reduce the sterile content of the coal

extracted and to keep foreign bodies (metal, wood and other materials) out of the coal. The main ones are for separate excavation of the sterile layers in extracting the coal from pits; clearing the waste from the surface of the coal strata with bulldozers; and separate evacuation of the waste from underground opening and preparatory operations. Efforts will also be made to ready all crushers on rotor excavators, installations for crushing lignite, and magnetic separators for operation in order retain metallic bodies. Consistent application of those measures will considerably improve the quality of the coal. According to the drafted programs, the big Isalnita and Rovinari electric power plants will be supplied with lignite with a heating capacity of 1,610-1,630 kilocalories per kg compared with the 1,560-1,590 kilocalories per kg of the coal delivered in January and February.

/Question/ What is the state of the investment projects, and how are the deadlines for activating the new pit and underground production capacities being observed?

/Answer/ In January and February the unfavorable weather directly affected the investment operations in pits and on mine surfaces. In the first 2 months of the year the investment plan in the extraction sector was fulfilled by only 68.3 percent. Nevertheless I should say that assembly of two rotor excavators, one dumping machine and their transport lines was completed at the Rosia de Jiu-Avans Pit. Those excavators have begun the march from the assembly platform to the working faces and will be placed in operation in April.

Ten mechanized cutting complexes were assembled and placed in operation underground in the same period in the Valea Jiului region (the Livezeni, Aninoasa, Vulcan and Petrosani mines), at the Motru Mining Combine (the Lupoia and Motru Vest mines), and at the Filipesti de Padure and Cimpulung mines of the Ploiesti Mining Combine. In March it is planned to place nine more cutting complexes in operation in Valea Jiului and in the units of the Rovinari, Motru and Ploiesti mining combines. Assembly schedules have been drafted for all new equipment for the investment projects implemented in the pits in the Oltenia regions, and delivery schedules in order of assembly for the necessary subassemblies have been arranged with the supplier plants.

In order to increase the production capacities, mainly in pits, the program approved by the Political Executive Committee of the RCP Central Committee calls for special measures to expedite the assembly and activation of new production lines equipped with 27 rotor excavators, 12 machines for dumping waste in the open, and 205 high-capacity conveyor belts. I believe the shortfalls logged in the first two months of the year will be recovered by the sustained efforts of the collectives of fitters and other workers at the investment worksites and by better organization of the work, and the 1985 investment plan will be entirely fulfilled. That will make it possible to make a more pronounced increase in coal production and to implement the program instituted by the party leadership.

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YUGOSLAVIA

NEW RULING ON MONETARY, CREDIT POLICY

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 21 Mar 85 p 2

[Article by R. Vuksanovic: "Stabilization Coverage"]

[Text] In mid-March the Federal Executive Council issued the Order on Attaining the Goals and Performing the Tasks of Joint Note Issue and Monetary Policy and the Joint Bases of Credit Policy in 1985, in which the level of primary note issue was fixed and the directions defined for carrying out credit policy. The total volume of primary note issue was set at 300.5 billion dinars, 239.4 billion of which will be committed to monetization of securities and support for achievement of the selective goals of monetary and credit policy.

Three billion dinars are earmarked for short-term credits to banks to support credits extended to individuals on the basis of definitive sale of foreign exchange, and 40 billion for credits to banks on the basis of the foreign exchange of individuals deposited with the National Bank of Yugoslavia. There will be 18.1 billion dinars for discharging obligations under federal laws previously enacted--14 billion to transfer remaining resources to organizations of associated labor on the basis of long-term credits for permanent working capital and 4.1 billion to discharge obligations under credit to the Federation to finance federal commodity reserves of industrial products.

The necessary annual amount of primary note issue was fixed by applying the planning methodology of the National Bank of Yugoslavia and was measured so as to guarantee achievement of the goals and performance of the tasks set in monetary and credit policy in the Resolution on Economic Policy and the order of the SFRY Assembly on the goals and tasks of joint note issue and monetary policy.

The way in which the selective goals of monetary and credit policy will be achieved is that organizations of associated labor will be able to use the primary note issue, through the banks, first on the basis of exports of goods and services and preparation of the production of goods and performance of services for export, and then production, stocks and reserves of wheat, corn, sugar beets and sugar, oilseed (including soybeans), raw oil, rough rice and polished rice, organized fattening of livestock (cattle, swine, sheep and poultry), fish, meat in packinghouses, domestic milk and dairy products, tobacco, grapes and wine in wine cellars in the socialized sector and apples in

cold storage. Credit will also be extended on this basis for inventories of coal, the sale and purchase of domestic equipment, ships and rail vehicles on credit within the country and to import the most important products (raw materials) from the developing countries and other products from particular currency areas.

The principal forms of use of primary note issue to meet the needs of the economy in 1985 are general monetization of securities and monetization with selective features. The conditions for its use on both bases have been set forth by the Board of Governors in the decision on measures to implement monetary and credit policy. Under that decision primary note issue would be used this year through monetization of securities by purchasing through banks 90-day bills of exchange issued by organizations of associated labor and their internal banks and carrying bank endorsement.

The conditions under which the National Bank would purchase the bills of exchange were, of course, precisely stated. First of all, it will purchase only those which are within 30 days of maturity, whose face value is less than 50,000 dinars, and then bills of exchange arising out of commodity-money transactions of organizations of associated labor in the economy, provided they have been previously discounted by the banks from which the National Bank is purchasing them. Another condition is that before that discounting the bills of exchange shall have been used at least once before endorsement as a means of payment in commodity-money relations, they shall have been in the bank portfolio at least 20 days, and they shall have been endorsed over to the National Bank.

In order to prevent fictitious monetization, the National Bank will not purchase bills of exchange which will mature in less than 10 days, nor those endorsed to the drawers or payees, nor those issued or endorsed in connection with distribution of joint revenues among members of an internal bank or on any other basis than a commodity-money transaction.

In addition to buying them, the National Bank will also issue short-term credits to banks on the basis of bills of exchange, and that up to 60 percent of the nominal value of the total portfolio of those bills of exchange which the bank has previously discounted.

In addition to discounting domestic bills of exchange with the National Bank, commercial banks may also use short-term credits from primary note issue on the basis of bills of exchange and other foreign securities which may be the subject of purchase and sale on foreign security markets. The reference here is to securities possessed by organizations of associated labor on the basis of exports of goods and services, which have been the basis for the bank issuing credit to those organizations. The banks may use these credits up to 60 percent of the equivalent dinar value of those securities, provided they come due within 3 months counted from the date when the credit is issued to the bank by the National Bank.

7045
CSO: 2800/279

YUGOSLAVIA

JOINT VENTURES IN 1985 OUTLINED

Belgrade BORBA in Serbo-Croatian 21 Mar 85 p 4

[Text] Belgrade, 20 March, TANJUG--The 15 contracts on joint ventures with foreign trade partners submitted for approval since the beginning of the year indicate that the recent amendments of the law on foreign investments have begun to encourage this type of Yugoslavia's economic cooperation with foreign countries.

The Federal Committee for Energy and Industry has so far approved only one contract, but the people in that institution say that not a single application will wait longer than 60 days for a response--the amount of time that was announced during preparations of the amendments in the law.

The agreement approved was between "Slavija Elektro" in Belgrade and the firm "Bishop Graphic" of Los Angeles on a joint venture in the production of an engineering graphic device for designing printed circuits and circuit boards. The share of the Americans in this investment project, which amounts to \$1.27 million, is slightly more than 28 percent. The life of the contract is 10 years.

Goods worth \$1.9 million a year will be produced by only 12 workers of "Slavija Elektro." A fourth of the output will be purchased by "Bishop Graphic"; the Yugoslav demand for this device, which up to now has mainly been imported, will be met, and it is also expected that there will be exports to third markets.

The value of most of the other contracts awaiting approval also ranges \$1 million. By and large it has to do with the foreign partner participating through deliveries of equipment and in certain cases technological know-how.

Thus "Unis" of Sarajevo intends to manufacture and export storage batteries with its West German partner, and the PKB ["Beograd" Agricultural Combine], again with a firm from the FRG--to improve the production of oilseed. Sales abroad have been guaranteed even in this transaction, just as in the contract of "Servo Mihalja" of Zrenjanin with a Canadian partner on the production of high-grade tobacco.

"Mesokombinat" of Rijeka and an Italian firm will make a joint investment in raising the California redworm. This valuable little animal turns stable manure into valuable mineralized humus.

Judging by the volume and type of investments, one can conclude that the foreign trade partners are still showing restraint about concluding joint arrangements. It is obvious that much more needs to be done abroad in interpreting the amendments in the law and more liberal arrangements offered.

Among the questions which might be heard most frequently abroad is the one about what happens to the foreign capital after the joint venture is over. The law guarantees recovery of the foreign partner's investment (during the life of the contract if possible), as well as compensation for use of his capital--profit. Assuming, of course, the joint undertaking turns a profit.

American business executives were recently sent some 60 proposals for joint ventures in which Yugoslavia is interested. Similar talks are being conducted in Great Britain, and there are also to be contacts with French, Austrian, Swiss and West German business people.

7045
CSO: 2800/279

YUGOSLAVIA

BRIEFS

KOSOVO MIGRATION--Kosovo opstinas (with the exception of Orahovac Opstina) reported that from 1 July to 31 December 1984 454 members of families and 1,312 single individuals of Serb and Montenegrin nationalities moved out of Kosovo; the total number 1,760 [sic] represents an increase of 53 family members over the first half of 1984. About 65 percent of the families who moved out in the second half of 1984 were from rural areas and 35 percent from cities; about 70 percent had jobs and housing. The 1984 figures represent a decline in the emigration of Serbs and Montenegrins from Kosovo compared to 1983. Also, in the first half of last year 24 families and 242 individuals submitted requests to return in 16 opstinas. According to opstina records, from September 1982 to the end of December 1984, 1,660 persons have returned to Kosovo, 437 of whom received jobs. From 1 July to the end of 1984 43 family members and 485 individuals returned, 196 of whom received jobs. The number of returnees in 1984 (totaling 942) has helped to create a more favorable atmosphere among the Serb and Montenegrin nationalities in Kosovo. [Excerpt] [Pristina JEDINSTVO (DELEGATSKE NOVINE supplement) in Serbo-Croatian 27 Mar 85 p 4]

KOSOVO EMPLOYMENT STRUCTURE--Of the 205,259 persons employed in Kosovo as of 30 September 1984, 140,310 were Albanians (68.4 percent), 46,249 were Serbs (22.5 percent), 6,746 were Montenegrins (3.3 percent), 2,689 were Turks (1.3 percent), 4,534 were Moslems (2.2 percent), 2,717 were Romanies (1.3 percent), while 2,014 (1.0 percent) were others [of undeclared nationality]. This shows both an increase in employment and fewer changes in the nationality structure of those employed compared to 1982. As of 30 November 1984, 107,761 persons were registered on unemployment records, including 84,075 Albanians, 14,504 Serbs, 1,384 Montenegrins, 2,278 Turks, 838 Moslems, and 4,682 others. [Excerpt] [Pristina JEDINSTVO (DELEGATSKE NOVINE supplement) in Serbo-Croatian 27 Mar 85 p 3]

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